Preliminary Age and Growth Comparisons of Red Grouper (*Epinephelus morio*) from the West Florida Shelf and the Bay of Campeche

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Red grouper (*Epinephelus morio*) are an important component of commercial fisheries for both the United States and Mexico. Data useful for determining stock differences between two Gulf of Mexico regions (northeast, southwest) were collected during fisheries independent long-line surveys in 2001 and 2002. Surveys utilized standardized sampling designs with modified commercial long-line gear. Age, length, and weight for red grouper were compared between the two regions. Age determinations were completed by reading whole and sectioned otoliths. Red grouper from the Bay of Campeche were significantly older (ANOVA d.f. = 147, $F = 18.59$, $P < 0.001$), however, no significant differences in lengths or weights were revealed between the two regions (length: ANOVA d.f. = 154, $F = 0.02$, $P = 0.90$; weight: ANOVA d.f. = 154, $F = 1.72$, $P = 0.19$). Three age classes (5, 6, and 7 years old) were collected in sufficient numbers for comparisons. There were no differences in ages 5 and 6, red grouper from the Bay of Campeche were significantly smaller at age 7 (length: 491 mm; weight: 1.8 kg) when compared to age 7 red grouper from the west Florida shelf (length: 571 mm; weight: 3.1 kg). Differences in age between the two areas could be due to differences in historical fishing pressure, management regulations, environmental conditions (i.e., water temperature, habitat, and depth), or small sample sizes.

KEY WORDS: Age, *Epinephelus morio* growth, Mexico

Comparaciones Preliminares entre la Edad y el Crecimiento del Mero Americano (*Epinephelus morio*) en la Plataforma del Eeste de Florida y la Bahía de Campeche

El mero americano (*Epinephelus morio*) es un componente importante de la pesquería comercial tanto del los Estados Unidos como del Golfo de Méjico. Los datos que se utilizan para determinar las diferencias de stock entre las dos regiones del Golfo de Méjico (Norte y Sur) fueros recogidos durante los

estudios con palangre realizados por pesquerías independientes en los años 2001 y 2002. Para ello se utilizaron diseños estándares de muestreo con herramientas modificadas procedentes de la pesca comercial con palangre. Se compararon las edades, longitudes y pesos de los meros rojos entre ambas regiones. Las determinaciones de las edades se completaron con la lectura de los otolitos tanto enteros como seccionados. Los meros rojos de la bahía de Campeche fueros significativamente más viejos (ANOVA d.f. = 147, F = 18.59, P < 0.001); sin embargo, no se encontraron diferencias significativas de longitud y peso entre las dos regiones del Golfo (longitud: ANOVA d.f. = 154, F = 0.02, P = 0.90; peso: ANOVA d.f. = 154, F = 1.72, P =0.19). Para las comparaciones, se recogieron un numero suficiente de peces de tres clases de edad (5, 6 y 7 años), No se observaron diferencias entre las edades 5 y 6. Los meros rojos de la bahía de Campeche eran significativamente más pequeños a la edad 7 (longitud: 491 mm; peso: 1.8 kg) comparados con los meros rojos de edad 7 de la plataforma del Oeste de Florida (longitud: 571 mm; peso: 3.1 kg). Las diferencias de edad entre las dos áreas pueden ser debidas a diferencias históricas de presión pesquera, regulaciones de gestión, condiciones ambientales (i.e., temperatura del agua, hábitat y profundidad) o el pequeño tamaño de las muestras.

PALABRAS CLAVES: Mero americano, *Epinephelus morio*, edad, Golfo de Méjico

Biology of Wahoo in Florida and the Bahamas

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Despite the economic importance of wahoo, *Acanthocybium solandri*, in many regions of the world, its biology and life history have received infrequent attention. The Fishery Management Plan for Dolphin and Wahoo in the Atlantic Region reports that estimates of growth, reproduction, etc. are needed to better understand the implications of various options for managing the wahoo fishery. The study detailed here was initiated in 2003 and designed in response to the need for more and better data. Wahoo are collected year-round from fishing ports along Florida's east coast through tournament sampling, and angler-intercept and carcass-retrieval programs. Additional samples are taken in the Bahamas during the winter months. The relative utility of otoliths, scales, fin rays, fin spines, and vertebrae as ageing structures is discussed here. Whole otoliths and fin ray sections show the most promise for use as ageing structures. Reproductive seasonality and size and age at maturity characterized from gonad-somatic indices and patterns of gametogenesis revealed in histological preparations are described. In the first two years of our study, we