



Zuñiga Flores, M.S., **S. Ortega García**, M.C. Rodriguez Jaramillo & J. López Martínez (2011). Reproductive dynamics of the common dolphinfish *Coryphaena hippurus* in the southern Gulf of California. *Marine Biology Research*, 7(7): 677-689. DOI: 10.1080/17451000.2011.554558

Reproductive dynamics of the common dolphinfish *Coryphaena hippurus* in the southern Gulf of California

Marcela S. Zuñiga Flores, Sofía Ortega García, M. Carmen Rodriguez Jaramillo & Juana López Martínez

In this study we investigate the reproductive dynamics of the common dolphinfish (Coryphaena hippurus), using gonads obtained from four locations in Baja California Sur. From August 2004 to November 2006, 2839 dolphinfish were collected (1399 males and 1440 females), ranging in size from 42 to 155 cm fork length (FL). The sampling revealed a marked seasonality in abundance with 65% of samples obtained in summer-autumn. Histological analyses of 320 gonads (84 males and 236 females) showed maximal reproductive activity during the months of increased abundance, which coincided with increased sea surface temperatures (28-30°C). No immature individuals were sampled and individuals of both sexes were shown to have advanced reproductive activities. Ovarian development showed different kinds of oocytes, indicating that dolphinfish have asynchronous gonadal development. The low gonadosomatic indices were attributed to post-spawning individuals sampled from August to October. Mean batch fecundity (number of oocytes) estimated for 24 females was 279,383. The sex ratio for the analysed period did not differ significantly from 1:1.02 (P=0.05). It was determined that 50% of all individuals reached maturity at an average length of 80 cm FL. Using reproductive indicators it was determined that the season of maximum reproduction for dolphinfish in the southern Gulf of California occurs mainly during the second half of the year, in the warm months of summer-autumn.

Palabras clave: *Coryphaena hippurus*, Body growth, Asynchronous development, batch fecundity, histological analysis, reproductive dynamics

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