



Zúñiga Flores, M.S., S. Ortega García & A. Klett Traulsen (2008). Interannual and seasonal variation of dolphinfish (*Coryphaena hippurus*) catch rates in the southern Gulf of California, Mexico. Fisheries Research, 94: 13-17. DOI: 10.1016/j.fishres.2008.06.003

## Interannual and seasonal variation of dolphinfish (*Coryphaena hippurus*) catch rates in the southern Gulf of California, Mexico

Marcela S. Zúñiga Flores, Sofía Ortega García & Alexander Klett Traulsen

Dolphinfish (*Coryphaena hippurus*) is found in tropical and subtropical waters, and is an important sport and commercial species. The migrations of this species are associated with sea surface temperature changes and therefore climatic events such as an El Niño have an effect on its distribution in the Pacific Ocean. Our objectives were to determine the seasonal and interannual variations in catch rate and to correlate these with sea surface temperature. The database used in this study was the catch rate (number of organisms/trip) made by the recreational fleet that operated in Cabo San Lucas, B.C.S. from 1990 to 2000. To identify trends that may exist due to fluctuations in tourism, which could generate a bias in the use of the catch rates as relative indices of abundance, we analysed the daily data base of the effort (number of trips) that were recorded by the harbor authorities. Significant differences were found in the monthly average of effort during summer–autumn, which is the hurricane season in this area. The monthly average stayed above 1700 trips. Although interannual variation was not significant (ANOVA,  $P > 0.05$ ), the seasonal effect showed significant differences with the highest average catch rates in summer–autumn (ANOVA,  $P < 0.05$ ). A significant relationship between catch rate and sea surface temperature was found ( $P < 0.05$ ), with a correlated coefficient value of  $r = 0.78$

Palabras clave: Cabo San Lucas, *Coryphaena hippurus* dolphinfish, Seasonal and interannual, variations of catch rates, Sea surface temperature, B.C.S

Para obtener copia del documento contacta con el autor (sortega@ipn.mx) o con el personal de la biblioteca (bibliocicimar@ipn.mx).