

H. Regional management

The range of California scorpionfish is restricted to southern California. A substantial, but unknown, proportion of the stock is in Mexican waters. Initial analysis conducted on individual sub-stocks showed that similar results are obtained for the nearshore stocks. This is corroborated by the similarity in the CPUE and sanitation abundances indices for the nearshore stocks. The sum of the individual sub-stock assessments was similar to the single southern California assessment. However, the individual sub-stock assessments indicated that the exploitation rates are lower in the offshore areas. Unfortunately, there are limited data for the offshore areas. Regional management would require obtaining length-frequency data by CDFG block to allow stock assessments by region. In addition, more information on the site fidelity of California scorpionfish from tagging data would be needed to determine the appropriateness of regional management.

I. Research needs

Differences in growth rates between the sexes may imply that the fisheries have different impacts on the sexes. Sex-specific sampling of the data (e.g. length-frequencies) would help refine the model and identify the different impacts on the sexes. There is only limited information on the stock structure and a large proportion of the stock resides in Mexican waters. Extensive tagging studies would help define the stock structure, evaluate the need for local scale assessments, and determine the impact of the Mexican component of the stock. Catches from the Mexican fisheries would also be beneficial. The growth data are based on limited sampling and an updated aging study may improve the assessment.

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Richard Cosgrove NMFS La Jolla provided habitat and bathymetry maps of southern California to aid in determining population structure.

We are grateful to the many people that provided us with the necessary data to carry out the assessment.

Data Sources

The CPFV southern California observer data from two independent surveys (1975-1978 and 1985-1989) conduct by the CDFG were provided by Paulo Serpa, Pacific States Marine Fisheries Commission (PSMFC), and received on 1/11/2005.

The trip level CPFV data were provided by from Wade Van Buskirk (PSMFC), and received on 11/24/2004

Landings data from CALCOM and CFIS, and trawl logs were provided by Gerry Kobylinsky, California PacFIN Coordinator (CDFG/PSMFC) and received on 3/03/2005

Commercial length-frequency data from the California port sampling program was provided by Valerie Taylor, CDFG, and received on 1/27/05

RecFIN data were extracted on 2/18/05

The month and block aggregated CPFV logbook data were provided by Kevin Hill, NMFS, and received on 2/25/05

The CalCOFI survey data were provided by Susie Jacobson, NMFS, and was received on 3/04/05.

Gonad index data from bimonthly trawl survey conducted off Ventura and Santa Barbara Counties from 1994 to 1995 were provided by Stephen Wertz, CDFG, and received on 2/25/05.

Los Angeles County Sanitation Districts (Palos Verdes) were provided by Dave Montagne and Shelly Walther, Los Angeles County Sanitation Districts, and received on 3/17/05

Hyperion Sanitation survey data were provided Curtis Cash, City of Los Angeles, Dept. of Public Works, Bureau of Sanitation, and received on 03/21/05.

Orange County Sanitation District survey data were provided Hai Nguyen, Orange County Sanitation District, and received on 03/24/05.

San Diego County Sanitation District survey data were provided Timothy Stebbins, City of San Diego Ocean Monitoring Program Environmental Monitoring & Technical Services Division, Metropolitan Wastewater Department, and received on 04/26/05.

K. Literature cited

Cope J.M., Piner, K., Minte-Vera, C.V., and Punt, A.E. 2003. Status and future prospects for the cabezon (*Scorpaenichthys marmoratus*) as assessed in 2003. Stock Assessment Report.