

Review of Habitat Information on white croaker (*Genyonemus lineatus*) and Nearshore Soft and Hard Bottom Fish Assemblages of Southern California

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EXECUTIVE SUMMARY

White croaker (*Genyonemus lineatus*) is an important sport fish that is frequently caught and consumed by pier and private boat anglers in southern California (Puffer *et al.* 1981, 1982; M. J. Allen *et al.* 1996). Although it is frequently caught and consumed, white croaker has high levels of contaminants (e.g., DDT and PCBs) in the vicinity of the Palos Verdes Shelf and Los Angeles Harbor (Pollock *et al.* 1991, SCCWRP *et al.* 1992, M. J. Allen and Cross 1994). As a result, health risk advisories are posted on piers in this area (Pollock *et al.* 1991, M. J. Allen *et al.* 1996). Most piers in southern California are surrounded by soft (sediment) bottoms, which are the primary habitat of white croaker (M. J. Allen 1982, L. G. Allen 1985). Hard-bottom species (e.g., surfperches, Embiotocidae; basses, Serranidae) caught by anglers in the area tend to have lower contaminant levels (Pollock *et al.* 1991, SCCWRP *et al.* 1992, M. J. Allen and Cross 1994). If soft bottoms surrounding piers were covered by rock, anglers may encounter less contaminated fishes, thus reducing their health risks from fish consumption.

This study provides background information for addressing the following question: Would placing new hard-bottom habitat (including artificial reefs) over existing soft bottom around piers and other fishing areas reduce the catch of white croaker while increasing or not affecting the catches of pelagic fish and hard-bottom fish. It attempts to provide an evaluation of the habitat preferences of white croaker and a description of species with which it is associated. The study also provides information on habitat and community studies where white croaker was not found. This information will aid in determining what species would be lost and gained by changing soft-bottom habitat to hard bottom, and thus how anglers' catch would change.

The following is a brief summary of literature on white croaker habitat and its associated species, as well as on fish species composition of pier fisheries and shallow hard-bottom assemblages. Appendix I is an annotated bibliography with information obtained from the literature cited. At present, about 70 journal publications, books, dissertations or theses, gray literature reports, and monitoring reports have been examined in detail. Most were obvious sources of information on white croaker, and of soft- and hard-bottom surveys and assemblages. Many of the white croaker studies were focused on aspects of its biology that did not involve habitat or provided only general information. Most monitoring reports involve trawl monitoring, and do not yield a lot of new information regarding white croaker on hard-bottom habitat.

Full Text

http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/760_WhiteCroakerHabitat.pdf