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The Future of Commercial Fisheries and Infrastructure of the Santa Barbara Channel Region

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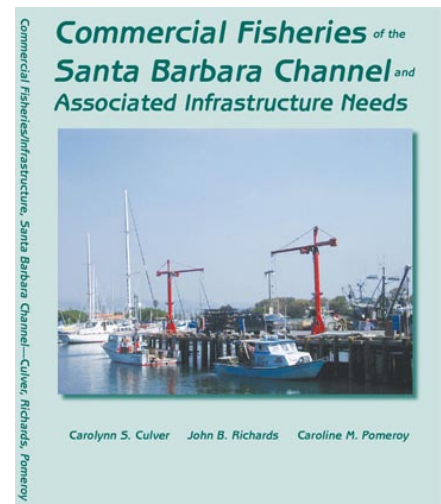
What is the future of commercial fisheries in California? Many people are asking this question based on their perceptions of the status of fisheries resources and the noticeable reduction in fishing activities at local harbors. Colleagues John Richards, Carrie Pomeroy, and I were recently asked this question by representatives of the Ventura Port District. They required information on the future of commercial fishing activity in their area as they were debating the need for undertaking costly renovations of their commercial fishing dock.

While it is difficult to predict the future, there was clearly a need for up-to-date information on commercial fisheries of the region and associated infrastructure needs. Thus, we designed a study to evaluate these factors and to provide some insight about the challenges facing local commercial fishing communities that may affect future fishing activities. Our technical report, Commercial Fisheries of the Santa Barbara Channel and Associated Infrastructure Needs, discusses:

- Trends in Santa Barbara Channel commercial fisheries over the past 25-year (1981-2005) and recent 5-year (2001-2005) periods, for the region and each of the four local ports.
- Profiles of fishing operations, including the distribution of operations among the local ports, vessel and crew sizes and estimates of time spent fishing inside and outside of the region.
- Current infrastructure needs of local fishermen, including suggested improvements.
- Examples of model fishing facilities and services at other West Coast harbors.
- Factors (environmental, regulatory and economic) currently influencing local fishery landings, with illustrations of when and how these factors have influenced landings for the top three fisheries of the region (squid, urchin and lobster) .
- Anticipated changes in local commercial fisheries and associated infrastructure needs.

- Challenges facing the local commercial fishing communities and opportunities for addressing those challenges.

Overall, it appears local commercial fisheries of the region will remain viable, at least over the next 5 to 10 years, provided there is adequate infrastructure and public support. Information from this report is helping harbor managers with decisions about improving and adapting fishing-related infrastructure to maintain viable working waterfronts in the region. Commercial fishery representatives are also using the results to help support their efforts for addressing their infrastructure needs. In addition, we are using this information to educate coastal communities of the Santa Barbara Channel region about their local commercial fisheries. Although this study addresses the Santa Barbara Channel region specifically, it may serve as a model for others interested in evaluating similar issues in their communities.



Copies of the report will be available soon for \$20.00 from California Sea Grant College Program, University of California, 9500 Gilman Drive, Dept 0232, La Jolla, CA 92093-0232, Phone: (858) 453-4446, Fax: (858) 453-2948, Web: www-csgc.ucsd.edu

For further information on the project, please contact Carrie Culver at csculver@ucdavis.edu.

New Sea Grant Fisheries Research Projects: Emphasis on Ecosystem-Based Management and Restoration

Compiled by Christina Johnson,
California Sea Grant Science Writer

In February, California Sea Grant began administering a new group of research projects. Those with relevance to commercial and recreational fisheries are summarized below. Note that the first four of these projects are funded through NOAA Sea Grant. The second four are funded through the 2004 California Ocean Protection Act.

California Sea Grant is interested in learning more about how you use marine science information and your views on how, or if, science benefits you. If you would like to share your thoughts, please contact Christina S. Johnson at California Sea Grant Communications, (858) 822-5344, csjohnson@ucsd.edu.

Evaluating Current Ocean Management Systems to Facilitate the Development of Ecosystem-Based Management.

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Map of the California Current Large Marine Ecosystem (LME), the project study area
Credit: Julia Ekstrom, University of California, Santa Barbara

In recent years, both federal and state officials have emphasized the need to coordinate ocean policies as a crucial first step toward improving the health of our nation's coast. This emphasis recognizes the inefficiencies and redundancies present in the current morass of regulations that govern economically valuable industries such as shipping, coastal tourism, coastal development and fishing. In an effort to streamline and coordinate ocean governance in California, the investigator of this project will 1) identify marine-related laws that overlap in function and space, 2) identify inconsistencies in ocean management, and 3) identify areas where agency and/or legal coordination can be improved. A by-product of the project will be the creation of a public database of coastal and marine laws.

Determination of Red and White Abalone Age and Growth Using Bomb Radiocarbon Signal and Lead Dating

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Red abalone
Credit: Laura Rogers-Bennett, California Department of Fish and Game

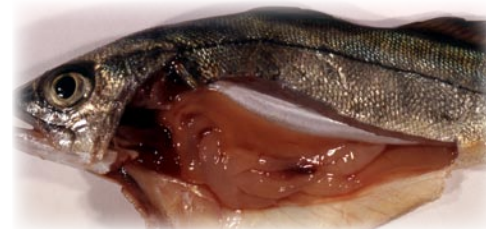
This project seeks to develop a technique for aging abalones from their shells, using radiocarbon markers from atomic bomb detonations in the 1950s and 1960s and radioactive lead measurements. Results will be compared to age estimates based on traditional techniques to determine, among other things, if large abalones are younger or older than predictions from current fisheries models. Such information is of use to state and federal abalone fishery and recovery plans.

Initial Steps Towards Evaluating Potential Disease Impacts of Propagated Marine Fish on Wild Stocks: A New Herpesvirus from White Seabass

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Fish with herpesvirus enteritus
Credit: Mark Okihiro, California Department of Fish and Game

Marine aquaculture has the potential to spread disease to wild fish stocks. In collaboration with a marine pathologist working for the California Department of Fish and Game and Hubbs-SeaWorld Research Institute, two research scientists from UC Davis will study aspects of "pathogen amplification" using a herpes-like virus in cultured white seabass (*Atractoscion*

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nobilis) as a case study. It is hoped that this work will establish criteria and tools for systematic evaluation of disease risks for a growing list of marine fish slated for artificial propagation.

Assessing Changes in Life History Traits and Reproductive Function of California Sheephead Across its Range: Historical Comparisons and the Effects of Fishing

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California sheephead
Credit: Chris Lowe,
Cal State University,
Long Beach

In the last three decades, California sheephead have become smaller on average. Females are reaching sexual maturity earlier and transforming into males younger and at odd times of the year. In this project, researchers will investigate possible explanations for changes in the species' size and reproductive structure. The leading theory is that selective pressure from fishing and/or pollutants, especially estrogenic compounds, is altering the species' life history characteristics and hence social structure.

Spiny Lobster Movement, Habitat Use and Abundance in Southern California: Bottom-up and Top-down Interactions in Kelp and Seagrass Habitats

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Spiny lobster
Credit: Kevin Hovel,
San Diego State
University

Researchers continue to tag and acoustically track California spiny lobsters to better understand the animal's movement patterns and benthic habitats (e.g., kelp forests, surf grass and eelgrass beds). These data are being used, among other things, to identify the animals' home ranges. In the first year of the project, biologists will tag 12 lobsters in San Diego and begin SCUBA surveys to estimate lobster densities and community structures in different habitats.

Two Decades of Fishing the Santa Barbara Channel: An Examination of Effort and Catch with Regard to Serial and Localized Depletions of Reef Fishes

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Between 1979 and 2001, the owner of a commercial sportfishing boat regularly took anglers to nearby reefs and carefully recorded what they caught at each reef and the weather that day. This project will examine whether his logbooks show a pattern of serial depletions of rockfishes and lingcod and, if so, whether these depletions were correlated with anglers' access fishing areas. The logbook records will also be compared to results published in academic fisheries journals.

Bi-national Studies Leading to Ecosystems-based Management Strategy for the Common Thresher Shark and Other Fishery Resources in the Southern California Bight

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S.C.B.E.C. logo
Credit: Dan Cartamil,
University of California,
San Diego

In collaboration with researchers from Baja California, Mexico, biologists will describe artisanal and commercial thresher shark fisheries and identify essential habitat areas for juvenile threshers in northwestern Baja. Similar studies have been done in California. The emphasis on gathering basic fisheries data in Baja represents a vital step forward in the ability to establish binational thresher shark management that will truly protect the species and the fishery.

(SGML)

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Sea Grant Fisheries

Newsletter Evaluation and Future

We asked for your opinions about this newsletter in the Fall issue. We received 25 responses (only two electronically) from folks with a wide diversity of careers. Of the 23 who said the newsletter should be continued, 20 felt it should remain a quarterly. About half of you use the newsletter to seek further information on specific topics, order publications, or pass on to others (average of 5 people). Others use it for news stories, reference libraries and starting fires in their wood stove.

Topics that you would like to see covered centered primarily on marine fisheries issues and status of fisheries updates. Based on this feedback, the newsletter will continue as a quarterly with a focus on complex fisheries issues. Thank you to those who responded to the evaluation.

Marine Fisheries Specialist and fisheries newsletter editor Christopher Dewees retired April 1, 2007 after 35 years with Cooperative Extension and Sea Grant. His Sea Grant Extension colleagues will continue to compile the newsletter.

This quarterly newsletter was supported by the National Sea Grant College Program of the U.S. Department of Commerce's National Oceanic and Atmospheric Administration under NOAA Grant #NA04OAR4170038, project number A/P-2, through the California Sea Grant College Program. The views expressed herein do not necessarily reflect the views of any of those organizations.

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Designer: Janelle Kohl

