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Nelson Nabbed for Northern Fisheries Position

We are pleased to announce that Dr. Peter A. Nelson accepted the new Sea Grant Cooperative Extension Humboldt-Del Norte County Fisheries Advisor position. Peter brings a unique combination of hands-on marine fisheries experience, skills, and fisheries biology education to the position. He comes to us after several years of working collaboratively with fishermen on projects to reduce bycatch in the eastern Pacific tuna fishery. Previously he worked on coral reef fishes and fisheries at the University of Hawaii.

Nelson earned his M.S. degree in Marine Science at UC Santa Cruz where he completed a thesis on the behavioral ecology and habitat structure of kelp rockfish. This training fit well with work he did on nearshore fisheries as a technician with the California Department of Fish and Game in Monterey. Nelson then went on to earn his doctorate at Northern Arizona University with a dissertation on the fish assemblages found around flotsam in the Pacific off the west coast of Panama.

Nelson and his family will be moving to the Eureka area early in March. He is looking forward to applying his applied research and outreach skills to local marine fisheries issues. Nelson will be located in the same office as Marine Advisor Susan (McBride) Schlosser. The address is Sea Grant Extension Program, 2 Commercial Street, Suite 4, Eureka, CA 95501; Phone (707) 443-8369.



Peter Nelson with daughter Ursula, photo by P. Nelson

California Sea Urchin Commission

Participants in California's commercial sea urchin fishery voted overwhelmingly in 2004 to form a commission through the California Department of Food and Agriculture.

The Sea Urchin Commission includes ten elected commissioners and one appointed public member. The Commission also includes several nonvoting members representing organizations significant to the sea urchin fishery.

Commission activities are funded by an assessment on sea urchin harvested and processed in California and which is paid equally by divers and handlers. The Commission may undertake various industry initiatives, including implementation of a diver-based urchin resource assessment program, independent scientific research, development of management alternatives, public information and educational programs, initiatives to develop new or expand existing markets, quality improvement opportunities, projects to promote California *uni*, and advocacy for the urchin fishery.



Sea urchin roe (*uni*) in Tokyo's Tsukiji market, photo by C.M. Dewees

Further information on the California Sea Urchin Commission is available from Executive Director Vern Goehring at (916) 444-8194 (voice), 1621B 13th Street, Sacramento, CA 95814; email: vern@cal.net. The Commission will have a website in the near future.



California Department of Fish and Game Marine Life Management Act Research Projects

The 1999 Marine Life Protection Act mandated that California design and manage an improved network of marine protected areas to, among other things, protect marine life and habitats, marine ecosystems and marine natural heritage. The following research projects address topics of relevance to the act and are funded by the California Department of Fish and Game and administered by California Sea Grant and University of Southern California (USC) Sea Grant. Contact the project leaders for further information on these projects.

- **Shelter Use, Movement, and Home Range of Spiny Lobsters in San Diego County** R/MLPA-04 Jan. 05–Dec. 06 Kevin Hovel/SDSU, (619) 594-6322, hovel@sciences.sdsu.edu; Christopher Lowe/CSULB, (562) 985-4918, clowe@csulb.edu.



Spiny lobsters, photo by C.H. Turner, California Department of Fish and Game

California spiny lobsters are an important predator within kelp forests and rocky shorelines in Southern California and also support valuable commercial and recreational fisheries. Commercial landings are about 500,000 pounds, worth an estimated \$5 million. This project addresses one of the priorities of the Marine Life Protection Act: to assess the home ranges of recreationally and commercially exploited mobile invertebrate species. Through surveys and sonic tagging, biologists will investigate how the size, type and distribution of sheltering areas influence lobster density, movement and home range in the Point Loma kelp forest, a prime lobster fishing area in San Diego County.

- **Population Genetics of the Commercially Important Cabezon** R/MLPA-05 Mar. 05–Feb. 06 Royden Nakamura/CPSU, (805) 756-2740, nakamura@calpoly.edu; Francis Villablanca/CPSU, (805) 756-2200, fvillabl@calpoly.edu.

Are cabezon a single, genetically homogenous population or are they composed of multiple, genetically distinct populations? The question will be answered using two

different methodologies and two spatial scales. A coast-wide study will look at mtDNA in the fish. A second study will look at microsatellite data from cabezon from three California "ichthyoprovinces" zoogeographically defined by biologists in 1978. The goal is to address whether cabezon, one of the top 10-nearshore fish landed commercially in California and a popular sport fish, should be managed as a single unit or as several demographically independent ones.



Cabezon, photo by California Department of Fish and Game photo

- **Temporal Variation in Fish Communities off Santa Cruz Island, California** R/MLPA-01 Mar. 05–Feb. 06 Ralph Larson/SFSU, (415) 338-1027, rlars@sfsu.edu.



Kelp greenling, photo by C.M. Dewees

The goal of this project is to evaluate long-term changes in Southern California fish populations by extending an existing data series collected at Santa Cruz Island between the early 1970s and 1996. A preliminary analysis of the data showed that warming of ocean waters and loss of kelp was associated with changes in fish populations. It now appears that ocean temperatures in the region have returned to a cooler climate regime. Biologists will take advantage of this temperature

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shift and resample sites around Santa Cruz Island in 2005–06. This fieldwork will let scientists document the effects of cooler water and presence or absence of kelp on fish populations. Sampling will be based on underwater video. The investigator will collaborate directly with the Channel Islands National Park. Findings will be of relevance to the California Department of Fish and Game's nearshore fishery management plans.

The Effects of Habitat Composition, Quality, and Breaks on Home Ranges of Exploited Nearshore Reef Fishes

R/MLPA-02 Jan. 05–Dec. 07 Christopher Lowe/CSULB, (562) 985-4918, clowe@csulb.edu; Jennifer Caselle/UCSB, (805) 893-5144, caselle@lifesci.ucsb.edu.

By acoustically tagging and tracking fishes, biologists will determine the home ranges and fine-scale habitat preferences of adult ocean whitefish and barred sand bass in the Catalina Marine Science Center Marine Life Refuge. The relationship between habitat quality and home range size will be investigated using tracking data and benthic habitat maps. Fish will also be translocated to adjacent areas to test the fidelity of fishes to their home ranges and to assess the degree to which different species (e.g., kelp bass, sandbass, whitefish and sheephead) will cross expanses of sand to return to their original home range. Findings have application in designing marine reserves of sufficient size and habitat quality to ensure the protection of reproductive adults. The research will also assist in identifying essential fish habitats for nearshore reef fishes.



Four year classes of copper rockfish, photo by C.M. Dewees

Using Life History Characteristics to Determine Optimum Placement of Marine Reserves

R/MLPA-03 Mar. 05–Feb. 07 Steven Berkeley/UCSC, (831)459-3530, stevenab@cats.ucsc.edu; Steve Parker/ODFW, (541) 867-0300, steve.parker@oregon.state.edu.

Researchers will identify those species of West Coast groundfish most likely to benefit from the establishment of marine reserves. The lead investigator has recently shown that older black rockfish spawn earlier in the year than younger ones. The larvae from older females were also shown to be more likely to survive. Because marine reserves can potentially protect larger, older individuals, it

is critical to identify those species, such as black rockfish, that exhibit age-related patterns in reproductive output and larval quality. The identification of these species can help resource managers select sites for marine reserves and identify essential fish habitats.

American Fisheries Society Marine Fisheries Session

The California-Nevada Chapter of the American Fisheries Society will meet March 17-19 at the Holiday Inn Capital Plaza in Sacramento. A March 18 session will feature four marine fisheries papers:

- Mako shark movement patterns and conservation. C.A. Sepulveda, S. Kohin and J.B. Graham. (Sea Grant funded research).
- Evaluation of persistence for California nearshore rockfishes by estimation of fractional lifetime egg production. M.R. O'Farrell and L.W. Botsford.
- Racing for crabs: Costs and management options in California's commercial Dungeness crab fishery. C.M. Dewees, K. Sortais, M.J. Krachey, S.C. Hackett and D.G. Hankin. (Sea Grant funded research).
- Survival and maturation of California current system salmon: Individual-based modeling of size and time of ocean entry and early ocean life history. C.A. Lawrence and L.W. Botsford.

For further information visit the Cal-Neva website at <http://www.afs-calneva.org>.

In the next Sea Grant Fisheries Issue:

- We will introduce our third new Marine Fisheries Extension Advisor who will be located in the Monterey Bay area.
- Find out about new Sea Grant marine fisheries research projects starting in March 2005.
- Other fisheries news.

Update: Ventura-based Marine Fisheries Advisor Carrie Culver has new contact information. Her phone is (805) 645-1469 and email is csculver@ucdavis.edu.

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Sea Grant Fisheries

Seafood Quality and Safety Training

An important series of quality, regulatory update, HACCP and Sanitation Control Procedures training programs will be offered during the last two weeks of April 2005 in San Francisco and Irvine, California. Pre-registration is required. For details see <http://seafood.ucdavis.edu/events/ca-training.htm>. If you have questions, contact Pamela Tom at pdtom@ucdavis.edu.

These programs are offered to the seafood industry in cooperation with the California Sea Grant Extension Program, University of Alaska Marine Advisory Program, US Food and Drug Administration (San Francisco and Los Angeles Districts), California Department of Health Services - Food and Drug Branch, USDC/NOAA Seafood Inspection Program, US Department of Agriculture - Agricultural Marketing Service, Western Association of Food and Drug Officials and California Fisheries and Seafood Institute.

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