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First Pair of Public Meetings Held for Development of the Spiny Lobster Fishery Management Plan

by Travis Buck, Environmental Scientist

The Department of Fish and Game (DFG) kicked off the development of the Spiny Lobster Fishery Management Plan (FMP) with a pair of public meetings held in mid-April in Oxnard and Carlsbad. The meetings aimed to share information about the FMP process and give interested parties an opportunity to comment on DFG plans to develop a comprehensive Spiny Lobster FMP.

About sixty people attended each meeting, including commercial lobster fishermen and seafood buyers, and representatives from recreational fishing clubs, dive clubs, non-governmental organizations, marine scientists, and DFG.

After the FMP process was explained (see box, pg. 2), the public provided comments and suggestions, and asked questions relating to spiny lobster and its management.

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Attendees ask questions at a recent public meeting introducing the Spiny Lobster Fishery Management Plan process. photo © S.M. Barsky

Filling a Need: The San Francisco Bay Rocky Intertidal Habitat Monitoring Project

by Ryan Bartling, Environmental Scientist

The rocky intertidal area within San Francisco Bay is a vital habitat for multiple species of fish, birds and invertebrates, yet it has not been well monitored over the long term. The need for more long-term baseline data became clear after the Cosco-Busan oil

spill, when the lack of information hampered damage assessments.

As a result, several agencies, including the Department of Fish and Game (DFG) and conservation groups, are taking on the challenge of setting up a monitoring program with minimal staffing and a zero-dollar operating

budget. DFG staff are particularly interested because rocky intertidal areas provide critical spawning habitat for Pacific herring, an important forage fish both in San Francisco Bay and the open ocean.

DFG staff from the Aquaculture and Bay Management Project attended a recent planning workshop to help develop a rocky intertidal monitoring program for the bay. The group is developing a standardized, yet simple sampling design that relies on photo plots for monitoring rocky intertidal habitat.

Several permanent monitoring sites will be chosen in San Francisco Bay. These sites will be sampled biannually and photographed to build a photo archive of habitat conditions. In addition to photo transects, crabs and algal cover will be noted. This information will be invaluable in the event of a catastrophic event and it may be used in the future to detect changes in habitat due to the effects of

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What Will a Spiny Lobster Fishery Management Plan Look Like?

A Fishery Management Plan (FMP) is a framework document that gathers together the best available scientific information on a species and its fisheries (both recreational and commercial), the economic conditions under which they operate, and the effects of the fisheries on the marine ecosystem.

The Spiny Lobster FMP will review current fishery management methods and examine whether new management measures should be considered, with the ultimate goal of ensuring the sustainability of the lobster resource and its fisheries. It will be based on the best readily available science and may include a stock assessment. It will also include harvest control rules that could be triggered if critical changes occur in the lobster resource or its fisheries. If the FMP ever increases or restricts the catch, the catch will be allocated fairly between the recreational and commercial sectors.

The FMP will be developed over the next few years in accordance with the Marine Life Management Act of 1998. Certain sections of the FMP document will be written by non-DFG experts under contract, while other sections will be completed by DFG staff. The draft FMP will undergo scientific and public review, and afterwards must be adopted by the Fish and Game Commission. If any regulation changes are required to implement the FMP, they will be considered by the Commission after adoption of the FMP. 🦞

"Lobster" continued from page 1

Some commercial fishermen expressed a desire for limits on the number of traps allowed to be fished, while several recreational fishermen suggested a slot limit (a minimum and a maximum size limit) as a management measure to ensure the sustainability of the resource.

Several people questioned why the lobster fishery needs further regulation when DFG recently produced a lobster stock assessment that indicated lobster are not currently being overfished. DFG staff explained that an FMP is a planning tool for the future of the resource, and doesn't necessarily signal that dramatic regulatory change in the management of the fisheries is necessary. If the data shows that there has been a change in the resource or the fisheries, the management response could come in the form of greater fishing opportunities or more restrictive regulations, depending on the situation.

DFG is committed to a FMP development process that is objective and transparent, with the primary goals of a comprehensive FMP and a sustainable lobster resource. During the formation of the Spiny Lobster FMP, DFG will seek advice and assistance from stakeholders, scientists, and other interested parties through public meetings, and through a "Lobster Advisory Committee" composed of appointed members who represent the various interested constituencies.

The public is welcome to observe Lobster Advisory Committee meetings, and comments will be allowed at specified times. Committee members were appointed by the DFG Director at the end of May. Spiny Lobster FMP public meetings will also be held in April of 2013 and 2014.

For information provided at the initial meetings, please see the meeting summary webpage at www.dfg.ca.gov/marine/lobsterfmp/meetingsummaries.asp. For more information, visit the Spiny Lobster FMP website at www.dfg.ca.gov/marine/lobsterfmp. 🦞

A Slow Day at the Ramp

...except for the "fanged salmon"!

by Alex Vejar, Environmental Scientist

Alex Vejar works with the California Recreational Fisheries Survey team. For Alex, this has meant spending time in places where anglers gather along the shore: piers, docks, jetties, beaches, and launch ramps. He interviews fishermen, measuring and weighing their fish, and answers questions regarding fishing regulations, all to keep tabs on the status and health of nearshore fish populations. But, as he describes in this article, even on slow days he sometimes finds the unexpected...

The windshield wipers unceremoniously slapped away droplets of water as I drove through the thick



October fog to the Shelter Island launch ramp on San Diego Bay. My assignment that misty morning: to interview anglers fishing from private boats for the California Recreational Fisheries Survey (CRFS).

The CRFS has gathered information from California's marine recreational anglers since 2004, targeting an assortment of fishing locations, including beaches and banks, man-made structures such as piers, and commercial passenger fishing vessels, also known as charter boats.

The complex, comprehensive survey is designed to gather information needed to make accurate and

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Marine Management News Fish Identification Quiz!

by Mary Patyten, Research Writer



Welcome to the Marine Management News Fish Identification Quiz for May 2012! Here's your chance to show off your fish identification knowledge and win an official Department of Fish and Game (DFG) fish tagging cap. To qualify for the drawing, simply send the correct answers via e-mail to AskMarine@dfg.ca.gov by September 15, 2012 correctly identifying:

- The species of the fish pictured below (scientific name and an accepted common name), and
 - The daily bag limit, as found in the 2012-2013 Ocean Sport Fishing regulations booklet
- Be sure to type "May MMN Fish Quiz" as the "Subject" of your e-mail. The winner will be selected during a random drawing from all correct answers received by September 15, 2012.

This flatfish moves from its shallow water feeding grounds to deeper waters along the continental shelf between November and March to spawn. This migration may happen only every other year in a behavior biologists call "skip spawning."

As they develop, the eggs rise slowly towards the surface, drifting with the currents for about two weeks. After hatching, the young fish swim upright with one eye located on each side of the body. The left eye begins to rotate over the snout to the right side of the body when the fish reaches about one inch in length. By the time both eyes have settled on the right side of the body and the left side pigmentation has faded to white, the young fish are about one and one-third inches long and looking for a home in shallow, nearshore waters, generally between May and September.

Very young fish feed on plankton. As they develop, they shift to feeding primarily on fishes, clam, crab, squid and other invertebrates. As adults, this fish is sometimes eaten by marine mammals, but is rarely preyed upon by other fish.

As they grow, young fish move offshore to deeper, sandy habitat. Females mature at eight to 16 years of age (average 12), however males mature earlier. A large

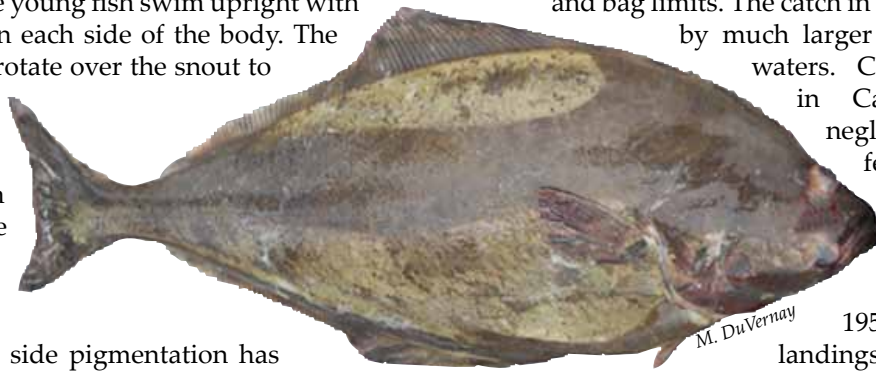
female of 140 pounds may produce over 2½ million eggs.

This fish ranges from Santa Barbara, California to Nome, Alaska off North America, at depths from 20 to 3,600 feet. Off California, most are found in nearshore areas from Fort Bragg northward.

The fisheries for this species are strictly regulated with gear restrictions, open/closed seasons, area restrictions, and bag limits. The catch in California is dwarfed by much larger catches in northern waters. Commercial landings in California are now negligible, with only a few hundred pounds brought ashore in 2010. Significantly more fish were landed prior to the 1950s, but after 1952 landings decreased rapidly and never recovered. In 2011, recreational fishermen in southern Oregon and northern California landed an estimated 9,648 lb. of this species.

If you think you know this species of fish, claim your prize by being the first to send an e-mail to DFG at AskMarine@dfg.ca.gov by September 15, 2012 with the correct scientific and common name, and the daily bag limit as found in the 2012-2013 Ocean Sport Fishing regulations booklet. Again, be sure to type "May MMN Fish Quiz" in the "Subject" portion of your e-mail.

Answers to the quiz and winner's names will be provided in the next issue of *Marine Management News*. 🍷



January 2012 "Mystery Fish": Barred Surfperch



DFG photo by K. Oda

Congratulations go out to California native Sarah G. of San Mateo, California for correctly identifying last issue's mystery fish as a barred surfperch, *Amphistichus argenteus*. The daily bag and possession limit for barred surfperch outside of San Francisco and San Pablo bays is 10 fish, per CCR Title 14, Section 28.59(c)(1).

Sarah works in nature resource management and says she "hopes her work will help to ensure sustainable use of marine resources." A "true ocean lover," she spends her free time scuba diving, visiting aquariums, and exploring beaches and tide pools. Congratulations again, Sarah! 🍷



Collaborative Survey Design: Indispensable Tool for Ocean Fishery Management

by Philip Law and Joe Weinstein,
Statistical Methods Analysts

Collecting data on the commercial California halibut fishery.
DFG photo by K. Penttila

Good science is the key to managing fishery resources, including the fish that anglers target. Managers need estimates of fishing effort and catches to manage fisheries, and scientific surveys provide that information.

But good surveys don't just happen. Each requires careful collaborative design to ensure it will provide the scientific data needed to manage the fishery.

"Careful design is essential, because a survey has costs in money, effort and time – both for Fish and Game and participating anglers," said Sandy Owen, Recreational Fishing Data Project lead scientist for DFG's Marine Region.

Joe Weinstein, a Marine Region statistician, likens the survey design process to the creation of a movie. "A successful movie typically is the result of deliberate collaborative design which heeds concerns and uses

expertise on various key elements: scenery, dialog, music, and audio effects." Much the same is true for scientific surveys, he says; success depends on careful collaborative design.

To collect the useful and valid data needed to manage ocean fishery resources efficiently, survey design teams typically include a Marine Region biologist, a statistician, and an experienced manager of past surveys. Each brings a needed kind of expertise to the effort, and together the team reviews current survey methods and – as needed – develops new methods to ensure that good science is the basis for all management decisions.

Typically the biologist will be familiar with the practices of the fishery as well as with fish life histories. He or she will have the most to say in response to such

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questions as: Where should sampling take place and what hours of the day or days of the week does fishing take place? What biological data do we need to collect? What can anglers tell us?

The statistician, knowledgeable in sampling and survey techniques, will ask questions such as: What are our accuracy requirements? What effective sample size (for example, the number of completed angler interviews) do we need? Considering the entire population of anglers in which we are interested, how representative will those anglers be that we will actually interview? In our sampling, what precautions can we take in order to eliminate or reduce bias?

The survey manager will ensure that the result of the design team’s work will be a sufficiently detailed and practical plan that specifies what data to collect, and when, where and how it is collected. The survey manager will want to ensure that the design specifications are feasible and complete, so samplers can be given manageable, well-guided tasks and logically planned schedules.

Notable cases of collaborative design include all the component surveys that comprise the California Recreational Fisheries Survey. In one survey, observers stationed onboard party boats (commercial passenger fishing vessels, or CPFVs) record catches and discarded fish. In another survey, licensed anglers are interviewed on the telephone to learn of their fishing effort for the past month. In other surveys, anglers on shore or returning from boat trips are interviewed in the field.



Collecting recreational fishing data aboard a party boat.
DFG file photo

Taken together, and in combination with CPFV logs, these surveys permit estimation of catch-per-trip and of the number of trips taken, and provide the recreational fishery estimates that guide the management of all California marine finfish.

California’s coastal and offshore waters are ecologically distinctive, with natural resources stretching all along its 1,000-plus mile coastline. Designing good scientific surveys is just one way the Marine Region strives to complete its mission “to protect, maintain, enhance, and restore California’s marine ecosystems for their ecological values and their use and enjoyment by the public through good science and effective communication.”

More Greenlings In The Bag, And Other Regulation Changes

by Mary Patyten, Research Writer

DFG reminds fishermen that several regulation changes are in the offing:

Greenlings

On May 1, 2012 new regulations increased the 2012 California recreational and commercial limits for kelp greenlings and rock greenlings. The changes apply statewide:

- A greenlings daily recreational bag limit increase to 10 fish within the 10 fish Rockfish, Cabezon and Greenling (RCG) complex daily bag limit.
- A total allowable catch increase for greenlings, to 121,900 pounds (55.3 metric tons), consistent with federal limits and three times the current total allowable catch.
- Commercial bi-monthly trip limit increases.

Fishermen are advised to check regulations before targeting any federally managed groundfish, including kelp greenling. For more information check the DFG website at www.dfg.ca.gov/marine/

groundfishcentral or call the Recreational Groundfish Hotline at (831) 649-2801.

Kellet’s Whelk

A closed season has been established for Kellet’s whelk, effective March 14, 2012. Both commercial and sport fisheries are open each year from July 1 through the first Wednesday after the 15th of March. Commercial fishing regulations are available at www.dfg.ca.gov/marine/invertebrate/kelletswhelk.asp#comm, and recreational fishing regulation updates are available in the current Freshwater and Ocean Sport Fishing Regulations Supplement, available at www.dfg.ca.gov/regulations.

Commercial Dungeness Crab

A new Dungeness Crab Trap Limit Program plan is available for public review and comment. Comments must be received by August 20, 2012. The plan and related information is available on the DFG website at www.dfg.ca.gov/marine/invertebrate/traplimit.asp.



UPDATES

Marine Management News

Selected “snapshots” of current Marine Region projects by DFG Staff

Bass Fisheries

DFG’s Fisheries Independent/Scuba Assessment Project has completed its analysis of the bass fisheries (kelp bass, barred sand bass, and spotted sand bass). On Jan. 18, 2012, DFG gave a presentation on their findings at the public meeting of the Marine Resources Committee (a sub-committee of the Fish and Game Commission) in Santa Barbara. At the following Fish and Game Commission meeting, the Commission directed DFG to prepare a regulatory package for the basses. The notice hearing was held on May 23, 2012. The public comment period will run through Nov. 7, 2012. To provide comments on the regulations, DFG encourages you to refer to the California Regulatory Notice Register (Register 2012 No. 23-Z), monitor the Commission’s website (www.fgc.ca.gov/regulations/2012/index.aspx), or contact the Commission office and ask to be added to the mailing list. The public may provide testimony regarding the proposed regulation changes:

- in person at a Commission meeting
- by sending comments to FGC@fgc.ca.gov
- by mailing comments to the California Fish and Game Commission, 1416 Ninth St., Suite. 1320, Sacramento, CA 95814
- by fax to (916) 653-5040.

The discussion meeting for this regulatory package is scheduled for the Fish and Game Commission meeting on Aug. 8 in Ventura, and the Adoption Hearing is scheduled for the Nov. 7 meeting in Los Angeles.

New Recreational Fishing Records

Two new recreational diving and angling records were logged into the books since Jan. 2012. On Mar. 3, 2012 Jim Russell speared a 6 lb. 10 oz. monkeyface prickleback (*Cebidichthys violaceus*) off Carmel to capture the state spearfishing record for that species. In the angling records category, Ruthie Montgomery



Jim Russell displays his state diving record monkeyface prickleback, center, atop his kayak. DFG file photo

caught a 3 lb. 7 oz. redbtail surfperch (*Amphistichus rhodoterus*) on Apr. 23, 2012 while fishing on Kellogg Beach in Del Norte County, to capture that species’ state angling record. Congratulations to these new state sport fishing record holders! For more information about state recreational fishing and diving records, see the DFG Record Ocean Sport Fish Web page at www.dfg.ca.gov/marine/records.asp.

Invertebrate Die-off

Researchers continue to investigate the unprecedented invertebrate die-off that

occurred along the Sonoma County coastline from Bodega Bay to Anchor Bay in Aug. 2011. The event killed large numbers of invertebrates including red abalone, causing the California Fish and Game Commission to close the red abalone season in Sonoma County for the remainder of 2011. It was also the first confirmed report of a plankton bloom killing a suite of economically and ecologically important invertebrates in northern California. During the die-off, a red tide dominated by *Gonyaulax spinifera*, a form of plankton rarely seen off California, may have produced a toxin responsible for killing the invertebrates. The affected species eat completely different foods—red abalone and sea urchins eat drifting algae, while sea stars eat mussels—leaving researchers puzzled by how the toxin could have been transferred from the plankton to the invertebrates. Incidental ingestion has been suggested as one possible route of exposure. The investigation will monitor the effects of the die-off through 2012 and beyond, as well as determining whether the genetic structure of the abalone population has changed as a result of the die-off. Since *Gonyaulax* can produce cysts that lie dormant on the seafloor, a similar bloom event is possible in the future, if the cysts rebloom. For information about California’s invertebrate species, visit www.dfg.ca.gov/marine/invertebrate.

Get Hooked on the Marine Region and MLPA Web Sites!

by Aaron Del Monte, Marine Region Webmaster

For the latest information on fishing regulations, marine resources, and news affecting our California coastline, your first stop should be the Department of Fish and Game Marine Region website, located at www.dfg.ca.gov/marine. This comprehensive information source currently contains well over 2,000 web pages and documents readily available to the public. If you are new to this website, we invite you to explore the valuable resources we have created. For those who have already visited the site, be sure to check back regularly, since new features, updates, and press releases are added every week. Here are some recent, noteworthy updates:

2012-2013 Freshwater and Ocean Sport Regulations Supplement

www.dfg.ca.gov/marine/sportfishing_regs2012.asp

This is the 2012-2013 Freshwater and Ocean Sport Fishing Regulations Supplement (in PDF format) that will be distributed in June, 2012. The bookmarked PDF file contains 2012 fishing regulations for ocean salmon and changes to regulations for Kelle's whelk, kelp and rock greenlings, and Blue Cavern State Marine Conservation Area.

Summary of California Ocean Salmon Seasons

www.dfg.ca.gov/marine/oceansalmon.asp

This page contains an easy-to-read listing of this year's season opening and closing dates, minimum size limits, and other regulations for the California recreational and commercial ocean salmon seasons.

California Spiny Lobster Fishery Management Plan

www.dfg.ca.gov/marine/lobsterfmp

DFG is moving forward with the development of a fishery management plan for California spiny lobster, which supports important commercial and recreational fisheries and plays a key role in the southern California

kelp forest ecosystem. On this page you can find a list of newly nominated Spiny Lobster Advisory Committee members and a timeline of the fishery management plan process.

Here are some of our most popular pages:

California Grunion Facts and Runs

www.dfg.ca.gov/marine/grunionschedule.asp

Grunion, famous for their spawning behavior, are the object of a unique recreational fishery. This page contains facts about grunion and a list of expected grunion runs on the California coast through August 2012. Links to more expansive information and printable resources are also available.

California Ocean Sport Fishing Regulations Map

www.dfg.ca.gov/marine/fishing_map.asp

Going ocean fishing? This should be your first stop. Simply click the marine location where you plan to fish and you will access a compact list of sport fishing regulations for that area. The pages are printer-friendly, so you can print the regulations and take them with you on your next fishing trip. These pages are updated frequently, so you can be assured that they contain the most up-to-date information.

Ocean Fishing: Laws and Regulations

www.dfg.ca.gov/marine/regulations.asp

Are you looking for more detailed information about fishing regulations? This page contains links to useful publications and other information related to both sport and commercial fishing.

State Finfish Management Project

www.dfg.ca.gov/marine/sfmp

The State Finfish Management Project focuses on fisheries that are recreationally, commercially and ecologically important to California, and which

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The Marine Life Protection Act (MLPA) Website

www.dfg.ca.gov/mlpa

The 1999 MLPA directed the state to design and manage a network of marine protected areas (MPAs) in order to, among other things, protect marine life and habitats, marine ecosystems, and marine natural heritage, as well as improve recreational, educational and study opportunities provided by marine ecosystems. This website contains up-to-date information about this exciting endeavor, including these popular resources:

South Coast Marine Protected Areas

www.dfg.ca.gov/mlpa/scmpas_list.asp

California's new and improved Marine Protected Areas (MPAs) network in the south coast region (Point Conception in Santa Barbara County to the California/Mexico border) went into effect January

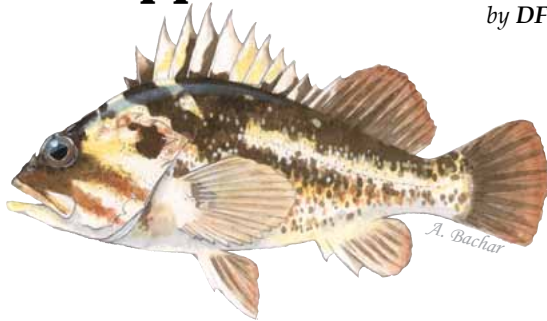
1, 2012. The south coast MPA network encompasses 37 new or modified MPAs, plus the pre-existing 13 MPAs and two special closures located at the northern Channel Islands. This page contains summaries of the regulations and boundaries for each MPA, plus links to maps.

"MPA Website" continued on page 9

Creature Feature

Copper Rockfish

by DFG Staff



Copper rockfish are found statewide off the California coast, but are most common from the Santa Barbara Channel Islands and southern California coast to central California. Generally speaking, copper rockfish may be found from the intertidal area (especially very young individuals) to water depths around 600 ft.

Distinguishing Characteristics

Highly variable in color. Wide range of blotchy colors; commonly olive, dark brown, copper-pink, or red. Light-colored stripe along rear two-thirds of lateral line. Several bars radiate back from eyes. Belly bright white. Deep red individuals that may be mistaken for vermilion rockfish are frequently found around the Channel Islands.

Life History & Other Notes

Copper rockfish usually feed during morning and evening hours near the bottom on crabs, shrimps, and other crustaceans. They will also eat squid, octopus, spiny dogfish, and small fishes including greenlings and surfperches.

As with other rockfishes, fertilization is internal and live young are born. Young copper rockfish are usually found over sand or low rock features. Adults are primarily found in boulder fields and over larger rocks, where they may be solitary or gathered in aggregations of up to 100 individuals. This fish is often taken with other rockfish species including gopher, vermilion and black rockfishes. It will readily bite cut strips of squid, live bait such as anchovies, and various jigs.

Excerpt from the California Finfish and Shellfish Identification Book. Single copies of the book are available to California residents free of charge by emailing a request to publications@dfg.ca.gov

Copper Rockfish

SCIENTIFIC NAME

Sebastes caurinus

OTHER COMMON NAMES

whitebelly, chucklehead

RANGE & HABITAT

Statewide, more offshore in Southern California, over rocky habitat.

LENGTH & WEIGHT

To 26+ in.

LIFESPAN

To 50 YEARS

DIET & SUGGESTED BAIT

Feeds on crab, squid, octopus, fishes, and shrimp. Try fishing with squid or live anchovies for bait, or use jigs.

"Habitat" continued from page 1

climate change. The draft sampling framework will be based on assessments done during the Gulf of Mexico Deepwater Horizon oil spill. The sampling effort will focus on the central portion of San Francisco Bay due to its proximity to several port complexes.

This collaborative effort is being developed with the National Park Service, DFG's Office of Spill Prevention and Response, Richardson Bay Audubon Center and Sanctuary, San Francisco State University, University of California at Berkeley as well as several other natural resource conservation groups.

"Fangs" continued from page 2

timely estimates of catch and effort, based on the information provided by fishermen. The focus of today's survey is to get catch and effort information from anglers on private boats returning from single- or multiple-day fishing trips. This means I can look forward to identifying, measuring and weighing all the fish that anglers have kept, and gathering information on any fish they may have released or lost to sea lions. I will also gather data on catch location, depth, the number of days the angler fished in the last 12 months, the angler's county of residence, and zip code.

Before the fun begins, I drive around the parking lot counting all the empty trailers to find out how many boats have already launched. These "trailer counts" help determine total fishing effort. There are 12 empty trailers in the parking lot, which means fishing effort will probably be low today. During the spring and summer months when tuna are biting offshore, it's normal to see 50 to 200 empty trailers at this site. CRFS conducts surveys on slow fishing days like today, as well as busy ones, to make sure the estimates include all kinds of fishing pressure, and to help ensure that CRFS is not biased.

A boat begins exiting the water a few minutes later. It's a big red kayak with fishing gear onboard, so I walk over to its owner, toting my clip board, data sheets and measuring board. I ask if he's willing to tell me about his fishing trip; the survey is voluntary and confidential, and many anglers find it interesting.

The angler turns out to be a nice guy who likes to talk about fishing. First, I ask him what kind of fish he was targeting today. He replied that he was fishing for sand bass, so I ask if I can look at his catch. He says he had caught and released all his fish and they were in good condition: one kelp bass, one barred sandbass and two "silvery salmon-looking fish that both had two long sharp fangs on their upper lips".

Because of my extensive experience identifying fish at this site, I realize after a few more questions that the fish was likely a shortfin corvina, a species caught in San Diego Bay, which people usually describe as looking like white seabass. Shortfin corvina have one or two

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"Website" continued from page 7

are managed by the State alone. California halibut, surfperch, nearshore basses, and hagfish are among the species for which the project collects data.

Invertebrate Management Project

www.dfg.ca.gov/marine/invertebrate

The Invertebrate Management Project monitors and manages important commercial and recreational marine invertebrate fisheries occurring primarily in the nearshore environment of California's marine waters. These web pages contain expansive information about abalone, crabs, sea urchin, California spiny lobster and other marine invertebrates.

Thank you for using the Marine Region website as a resource for news, information and regulations. We hope you will visit our site again soon! 🐞

"MPA Website" continued from page 7

North Coast Study Region

www.dfg.ca.gov/mlpa/ncmpas_list.asp

The MPA planning process has been completed in the north coast study region (California/Oregon border to Alder Creek near Point Arena in Mendocino County) and nineteen MPAs, one State Marine Recreational Management Area and seven special closures were adopted by the Commission. The north coast MPAs are not expected to go into effect before 2013.

MPA Mobile Website

www.dfg.ca.gov/m/MPA

This website allows anglers, divers and other ocean users to look up current information about MPA regulations and boundaries from personal computers, as well as smartphones and other portable Internet-enabled devices. Users can search for any current MPA by name or county, or by using the interactive map. Users can also find and track their current location via GPS and determine whether or not they are currently located within an MPA. 🐞

"Fangs" continued from page 8

large canine teeth on each side of the upper jaw, so his description of a "fanged salmon" is understandable.

During each CRFS survey, we ask anglers about the fish that are thrown back, given away, used for bait, filleted, or eaten by sea lions, and list these "catches" separately from the fish kept by anglers and examined by samplers. This kayak angler's "catches" provide data for the former list, and include the fanged shortfin corvina.

At the end of the day, only one of the fishing parties had kept fish. I identified, measured and weighed two brown rockfish, which are very common in San Diego's nearshore waters and are easily distinguished by their brown color and a large dark spots on their gill covers. I also measured seven spiny lobsters. On busier days I can expect to measure 25 to 100 fish.

In all, I have intercepted 17 boats and interviewed six anglers who fished for finfish and one person who dove for spiny lobster. Some non-fishing boats at the ramp today included commercial hull cleaners, commercial lobster fishermen, boats working for the Navy and a few that were just out cruising.

The fog starts to roll back in as darkness falls. It's been a long eight hours at the launch ramp, especially with the slow fishing action. But I know the information gathered on slow days is just as important as data gathered on fast-paced days when I can hardly keep up with fishermen hauling out their boats in quick succession. My data will soon find its way into a database used to help estimate the total marine recreational finfish catch and effort in California. This information will be used by fishery managers to fulfill the primary goal of CRFS: to produce, in a timely manner, the marine recreational fishery-based data needed to sustainably manage California's marine recreational fisheries.

For more information on CRFS please visit the CRFS website at www.dfg.ca.gov/marine/crfs.asp. 🐞

Upcoming Commission and Council Meetings

2012 California Fish and Game Commission

www.fgc.ca.gov/meetings/2012

May 23
Monterey

June 6
Eureka

June 20
Mammoth Lakes

Aug. 8-9*
Ventura

* When possible, meetings will be held on the first day only.

2012 Pacific Fishery Management Council

www.pcouncil.org/council-operations/council-meetings/future-meetings/

June
21-26
San Mateo

Sept.
13-18
Boise ID

Nov.
2-7
Costa Mesa

For the latest information on upcoming fishery-related meetings, please go to our Calendar of Events at www.dfg.ca.gov/marine/calendar.asp or contact the Monterey DFG office at (831) 649-2870.

MARINE Management News

Marine Management News is published three times per year by the Marine Region of the California Department of Fish and Game for everyone interested in the management and conservation of California's living marine resources. Through this newsletter we hope to keep all associates and constituents interested in participating in and/or tracking the progress of the Marine Life Management Act (MLMA) informed of developments. The MLMA strongly emphasizes an open decision-making process that involves people interested in or affected by management measures.

For more information on the MLMA or to sign up to become more involved, please visit our Web site at www.dfg.ca.gov/marine.

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The Marine Life Management Act

California's Marine Life Management Act (MLMA) of 1998 is an innovative, collaborative, science-based approach to managing all of California's living marine resources. One of its major goals is the long-term sustainability of our resources and our fisheries. The MLMA recognizes and values the non-consumptive benefits of healthy marine life as well as the interests of those who are economically dependent upon them. Implementation and enforcement of the MLMA is the responsibility of the California Department of Fish and Game, whose mission is to conserve wildlife and the habitats upon which they depend through good science and informed citizen involvement. For more information visit www.dfg.ca.gov/marine.

DFG Marine Region mission:

"To protect, maintain, enhance, and restore California's marine ecosystems for their ecological values and their use and enjoyment by the public through good science and effective communication."

Alternate communication formats of this document are available upon request. If reasonable accommodation is needed, call DFG at (707) 964-5026. The California Relay Service for the deaf or hearing impaired can be utilized from TDD phones at (800) 733-2929.