

California Department of Fish and Game's

Loligo Examiner

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Introduction

Welcome. This edition of the *Loligo Examiner* brings you information about how the Channel Islands Marine Reserves and the acceptance by the Fish and Game Commission (the Commission) of Xantus's murrelets as a candidate for listing as a threatened species affect the market squid (*Loligo opalescens*) fishery. Other articles in this newsletter serve as a means for the California Department of Fish and Game (the Department) to provide market squid fishery participants and other interested persons with information on regulation changes, research activities, and the progress of squid fishery management.



For more information and an online copy of the Examiner – go to:
<http://www.dfg.ca.gov/mrd/marketsquid/index.html>

Channel Islands Marine Reserves Corey Kong – CDFG Santa Barbara

On October 23, 2002, the Commission voted to adopt the Department's preferred alternative for a network of marine reserves at the Channel Islands. This will be the largest system of marine reserves on the West Coast; 132 square nautical miles (175 square miles) of the Channel Islands National Marine Sanctuary have been set aside as no-take areas.

Governor Gray Davis applauded the Commission's vote and said "I'm delighted that today's vote advances our goal of preserving California's natural resources for our children and our children's children."

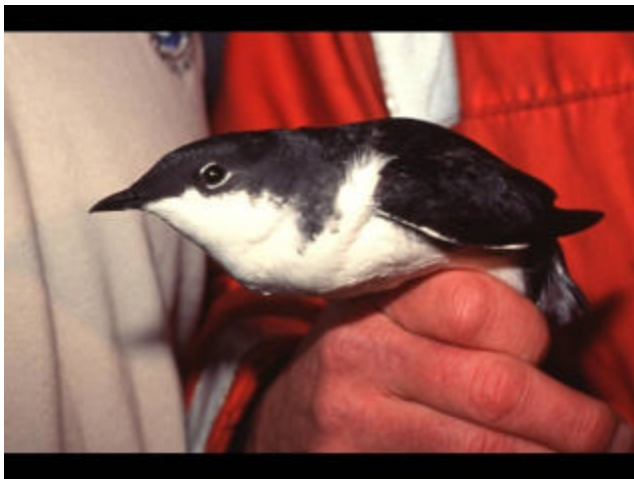
The process started in 1998 when the members of the public requested marine reserves at the Channel Islands. The Department and the Channel Islands National Marine Sanctuary initiated a collaborative process involving all stakeholders. The effort was overseen by a group of experts. Public forums were held and public comments were accepted; the majority of public comments favored reserves.

Pending approval by the Office of Administrative Law, the first phase of no take reserves becomes effective January 1, 2003, for areas within state waters. The next phase, upon adoption by the federal government, would extend some reserve areas into Federal Sanctuary waters.

The closures affect all fisheries, both commercial and sport. The squid fishery will lose some of its traditional fishing areas. The Department's market squid fishery logbook program indicates that 10% and 7% of the California catch came from designated reserve areas during the 2000/01 and 2001/02 seasons, respectively. For the southern fishery (south of 36° N), the catch rates increased to 11% and 8% for this same period. Most of the traditional squid fishery area lost will be at Anacapa Island. These percentages are similar to "the maximum potential loss" determined (12%) during the Channel Islands Marine Reserve process.

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Xantus's murrelet , Anacapa Island
Photo courtesy of Debra Hamilton - CDFG

Xantus's Murrelet a Candidate for Listing as a Threatened Species

Nora Rojek – CDFG Monterey

At the October 2002 meeting, the Commission designated the Xantus's murrelet as a threatened species candidate under the California Endangered Species Act (CESA). At the same time, the Commission also adopted emergency regulations governing incidental take of the murrelet during the candidacy period.

The emergency regulations authorize incidental take of Xantus's murrelets during the night-time (dusk to dawn) vessel operations from February 1 to July 15, within one nautical mile of Santa Barbara and Anacapa Islands, if vessels comply with the following conditions:

- 1) vessels are not engaged in night fishing or night diving;
- 2) external loud speakers on the vessels are not in use;
- 3) vessels are within a designated anchorage or safe harbor during the night, except when transiting through the specified areas; and
- 4) lighting on the vessels is limited to navigational lighting necessary for safe operations.

Take is also authorized during night-time vessel operations from July 16 to January 31, and at any time beyond the specified areas around Santa Barbara and Anacapa Islands.

These regulations will reduce night-time disturbance near breeding colonies. Artificial night lighting and excessive noise from a variety of vessels in the Channel Islands cause birds to become disoriented and can result in collisions with structures, parent-chick separation, disruption of courtship and breeding, and increased predation rates. During the one-year candidacy period, Xantus's murrelets receive the same protection under CESA as species that are officially listed as threatened or endangered.

According to the petition, filed by the Pacific Seabird Group, Xantus's murrelet populations have declined due to introduced and native predators, oil pollution, artificial light pollution, and other human and natural factors.

The world population of Xantus's murrelets is estimated at between 5,000 and 11,500 breeding birds. In California, between 2,500 and 2,800 birds nest on the Channel Islands, between February and July. Nests have been found at all of the Channel Islands except Santa Rosa and San Nicolas, with about 80% of the birds nesting at Santa Barbara and Anacapa Islands. Xantus's murrelets are nocturnal in their nesting activities. They gather on the waters near the islands at night and move to and from their nesting sites in the dark.

Over the next twelve months, the Department will evaluate the status of the species and provide the Commission with a report and recommendation as to whether listing of Xantus's murrelet under CESA is warranted. The Commission will then decide whether to list the murrelet under CESA and, if listed, designate it as a threatened or endangered species.

Jumbo Flying Squid Strandings

Annette Henry – CDFG La Jolla

Valerie Taylor – CDFG Los Alamitos

Thousands of jumbo flying squid, *Dosidicus gigas*, stranded themselves on southern California beaches over the summer. The first reported stranding was on July 18, at Swami's Beach in Encinitas, where approximately 200 squid were found over a mile stretch of shore. Their mantle lengths ranged from 16-24 inches, and they weighed between 2-2.5 pounds. On July 25, several thousands of squid beached themselves at La Jolla Shores, and another large stranding occurred on August

22, when approximately 2,500 of these “Red Demons” beached themselves in the cove just north of the USC lab at Catalina Island. In addition, smaller strandings were reported at Camp Pendleton, Newport Beach and Monterey.

The appearance of these jumbo squid attracted many local fishermen. Several fishermen flocked to the shores to haul in the squid while many party boats successfully targeted these squid on their twilight cruises. Reports of jumbo squid swarming underneath boats were not uncommon.

Jumbo flying squid are also known as Humboldt squid. Their range is usually from Peru north to Baja California, but warm water events, such as El Niño, can extend their range north to Oregon. Preliminary ageing studies indicate that these squid have a life span between 15-16 months.

From 1990 through 1996, the main fishery for jumbo squid took place off the coast of South America near Peru and Chile. Since 1997, the majority of the harvest has occurred in the Gulf of California. The Mexican fishery is comprised of automatic jigging vessels and artisanal boats. Two size modes of jumbo squid are taken in the fishery: 350 and 750-850 mm (dorsal mantle length). Over the last 10 years, an average of 110,000 short tons were harvested annually.

What causes the squid to strand remains elusive to squid experts. One theory is that the squid follow a food source, are caught up in the surf, and are unable to return to the water. Another theory is that the squid are being affected by domoic acid.

To assist squid researchers, the Department of Fish and Game collected squid from several of these strandings. Dr. Eric Hochberg, Santa Barbara Museum of Natural History, is evaluating population characteristics (length, weight, sex, age, and fecundity) as well as examining stomach contents from the stranded squid. Dr. William Gilly, Hopkins Marine Station, is checking into the possibility of domoic acid as a cause of the strandings. Although thousands of squid have died in the strandings, they are providing researchers with many opportunities to further investigate this species.

Logbook Reminder

In the middle of October 2002, light boat owners were sent logbooks with a new format. Please use the new logbooks in place of the old books. The new format will give biologists a better estimation of fishing effort based on time spent on searching and lighting for squid. If you did not receive the a logbook with the new format or have questions, please call Corey Kong at (805) 568-1227.

Several squid permittees were sent letters reminding them of overdue logs. Many of these permittees responded by sending in the missing logs. Monthly logs are due on or before the 10th of the following month. Make sure you have a log for every landing you make. Before the reminder letters, approximately 86% of all landings since July 2001 were recorded in logs received by the Department.

Channel Islands Marine Reserves

(continued from page 1)

The following information describes the closure boundaries for each area. No commercial squid fishing will be allowed in the following areas:

Santa Barbara Island State Marine Reserve.

This area is bounded by the mean high tide line, the three nautical mile offshore boundary and the following points:

33° 28.5' N. lat. 119° 01.7' W. long. (eastern tip of the island) to;

33° 28.5' N. lat. 118° 58.2' W. long. (along the 3 nm contour) to;

33° 24.9' N. lat. 119° 02.2' W. long. due north to;

33° 27.9' N. lat. 119° 02.2' W. long. (southern tip of the island)

Anacapa Island State Marine Reserve. This area is bounded by the mean high tide line and the following points:

34° 04' N. lat. 119° 24.6' W. long. due east to;

34° 04' N. lat. 119° 21' W. long. due south to;

34° 01.2' N. lat. 119° 21' W. long. (Arch Rock) along the mean high tide line to;

34° 00.6' N. lat. 119° 24.6' W. long. (Frenchy's Cove, the western point of Middle Island)

Anacapa Island State Marine Conservation

Area. This area is bounded by the mean high tide line and the following points:



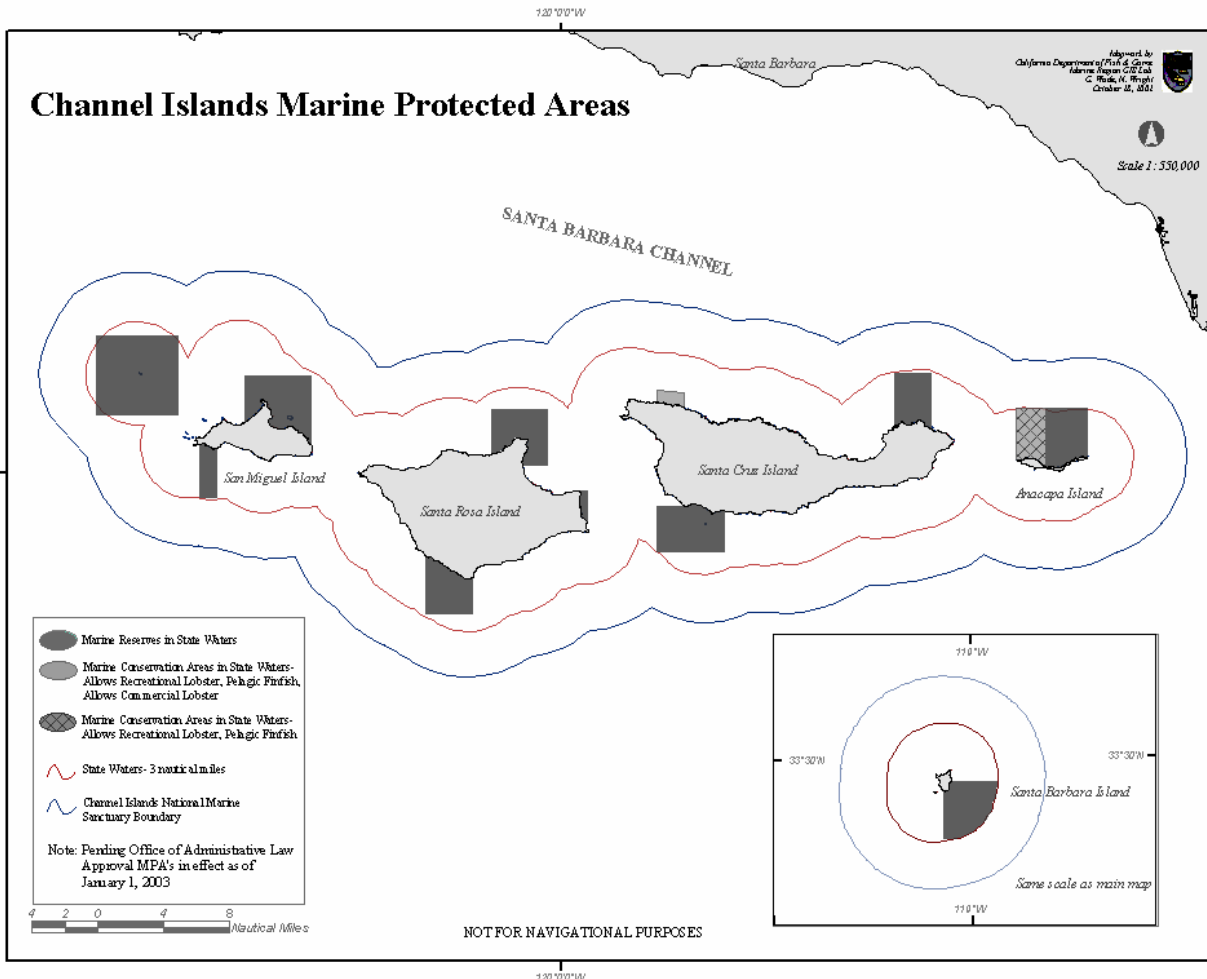
34° 04' N. lat. 119° 26.7' W. long. due east to;
 34° 04' N. lat. 119° 24.6' W. long. due south to;
 34° 00.6' N. lat. 119° 24.6' W. long. (Frenchy's
 Cove, the eastern point of West Island) to;
 34° 00.8' N. lat. 119° 26.7' W. long. (the western
 point of West Island)

Scorpion (Santa Cruz Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
 34° 06.2' N. lat. 119° 35.5' W. long. due east to;
 34° 06.2' N. lat. 119° 32.8' W. long. due south to;
 34° 02.8' N. lat. 119° 32.8' W. long. (the point inshore of Little Scorpion Rock) to;
 34° 02.9' N. lat. 119° 35.5' W. long. (the northeast side of Potato Harbor)

Painted Cave (Santa Cruz Island) State Marine Conservation Area. This area is

bounded by the mean high tide line, the one nautical mile offshore boundary, and the following points:
 34° 05.2' N. lat. 119° 53' W. long. along the one nautical mile contour to;
 34° 05' N. lat. 119° 51' W. long. due south to;
 34° 04' N. lat. 119° 51' W. long. (one mile east of Painted Cave) to;
 34° 04.5' N. lat. 119° 53' W. long. (one mile west of Painted Cave)

Gull Island (Santa Cruz Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
 33° 58' N. lat. 119° 53' W. long. due east to;
 33° 58' N. lat. 119° 51' W. long. (Morse Point) along the mean high tide line to;
 33° 57.7' N. lat. 119° 48' W. long. due south to;
 33° 55.2' N. lat. 119° 48' W. long. due west to;
 33° 55.2' N. lat. 119° 53' W. long.



Carrington Point (Santa Rosa Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
34° 04' N. lat. 120° 5.2' W. long. due east to;
34° 04' N. lat. 120° 01' W. long. due south to;
34° 00.5' N. lat. 120° 01' W. long. due west to;
34° 00.5' N. lat. 120° 02.8' W. long. (the pier in Becher's Bay) along the mean high tide line to;
34° 01.3' N. lat. 120° 05.2' W. long.

Skunk Point (Santa Rosa Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
33° 59' N. lat. 119° 58.8' W. long. (Skunk Point) due east to;
33° 59' N. lat. 119° 58' W. long. due south to;
33° 57.1' N. lat. 119° 58' W. long. due west to;
33° 57.1' N. lat. 119° 58.2' W. long. (Abalone Rocks)

South Point (Santa Rosa Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
33° 55' N. lat. 120° 10' W. long. along the mean high tide line to;
33° 53.8' N. lat. 120° 06.5' W. long. (South Point) due south to;
33° 51.4' N. lat. 120° 10' W. long. due west to;
33° 51.4' N. lat. 120° 06.5' W. long.

Harris Point (San Miguel Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
34° 06' N. lat. 120° 23.3' W. long.
34° 06' N. lat. 120° 18.4' W. long.
34° 01.8' N. lat. 120° 18.4' W. long. (Cardwell Point) along the mean high tide line to;
34° 03.1' N. lat. 120° 23.3' W. long. (the marker poles in Simonton Cove)
An exemption, where fishing will be allowed, exists between the mean high tide line in Cuyler Harbor and a line between the following points:
34° 03.5' N. lat. 120° 21.3' W. long.;
34° 02.9' N. lat. 120° 20.2' W. long.

Richardson Rock (San Miguel Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
34° 08.4' N. lat. 120° 34.2' W. long. due east to;
34° 08.4' N. lat. 120° 28.2' W. long. due south to;
34° 03.6' N. lat. 120° 28.2' W. long. due west to;
34° 03.6' N. lat. 120° 34.2' W. long.

Judith Rock (San Miguel Island) State Marine Reserve. This area is bounded by the mean high tide line and the following points:
34° 01.9' N. lat. 120° 26.5' W. long. (Adams Cove inside the wash rock) along the mean high tide line to;
34° 01.5' N. lat. 120° 25.3' W. long. (Judith Rock) due south to;
33° 58.5' N. lat. 120° 25.3' W. long. due west to;
33° 58.5' N. lat. 120° 26.5' W. long.

If you have any questions on the Channel Island Marine Reserves, please contact Senior Marine Biologist, John Ugoretz at (805) 560-6758
jugoretz@dfg.ca.gov.

The Squid Fishery and Marine Mammal Interactions

Dale Sweetnam – CDFG La Jolla

This is just a reminder that the California squid purse seine fishery is classified as a Category II fishery by the National Marine Fisheries Service (NMFS). As such, owners of vessels are required to register with NMFS and obtain a marine mammal authorization in order to lawfully incidentally take marine mammals under the Marine Mammal Protection Act (MMPA). Registration is not required for the brail (dip net) squid fishery. Other than the ever-present California sea lion, the marine mammals most likely to interact with this fishery are Risso's dolphins and short-finned pilot whales. Risso's dolphins are common along the coast, especially in the Southern California Bight. Pilot whales, once very common, have virtually disappeared from the Bight since the 1982-83 El Niño, although sightings have increased in recent years.

Are vessel owners required to report when marine mammals are injured or killed during fishing operations? Yes. All vessel owners, operators, or fishers participating in Category I, II or III fisheries must report all incidental injuries or mortalities to NMFS. "Injury" is defined as a wound or physical harm. Any animal released with fishing gear entangling, trailing or perforating any part of the body is also considered injured.

What can be done to deter marine mammals from fishing gear? According to NMFS proposed rule, acceptable deterrent methods include underwater acoustic devices (non-explosive), boat hazing (patrolling and blocking the net with a small boat), or spraying water. The use of seal bombs is allowed as a deterrent for sea lions and harbor seals. However, their use with whales and dolphins is prohibited. The use of firearms and projectiles (from crossbows, spearguns, archery gear, etc.), even if not shot directly at the animal, is prohibited. The bottom line is that no deterrent method may result in death or serious injury to a marine mammal. The only exceptions are for self defense or to save the life of a person in immediate danger.

Does this mean that marine mammals can be driven away from squid aggregations where I want to set my net? No. Under the MMPA this would be considered Level B harassment. Much like a whale watching vessel getting too close to a migrating whale, it is illegal to disrupt normal behaviors, such as feeding or migrating.

This information is intended to briefly answer several recent inquires about squid fishery interactions with marine mammals and to clear up any misconceptions about the use of deterrents. Additional information on marine mammal interactions can be found on the NMFS web site at:

http://ww.nmfs.noaa.gov/prot_res/PR2/Fisheries_Interactions.html or by contacting the NMFS regional office at:

NMFS, Southwest Region
Protected Species Division
501 W. Ocean Blvd., Suite 4200
Long Beach, CA 90802-4213
(562) 980-4000

Meetings

Fish and Game Commission Events

See the 2002 meeting schedule at the Commission website at:
www.dfg.ca.gov/fg_comm/.

You can contact the Commission at:
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P.O. Box 944209
Sacramento, CA 95244-2090

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<http://www.leginfo.ca.gov>

If you have any questions or comments concerning the squid fishery, you can mail or fax them to:

CA Department of Fish and Game
Marine Region – Squid Project
1933 Cliff Drive, Suite 9
Santa Barbara, CA 93109
(805) 568-1231 (business phone)
(805) 568-1235 (fax)

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