

SAN FRANCISCO BAY BIRD OBSERVATORY NEWSLETTER

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HELP WANTED

If you have a desire to visit Venice with its fabled system of canals but find yourself short on cash, or time, or both, you might consider a visit to the SFBBO office instead. We have our own system of canals and, like those Venetian waterways, ours, too, are not without accompanying problems.

The SFBBO "canals" comprise a system of drains which run beneath the concrete floor of the main building, surround the outer edge of that building, and form a grid pattern across the concrete parking area behind. Some of the outside drains are covered by steel plates so that we can drive our vehicles over them and avoid damaging our bodies by stepping in them. Others are open and provide home to various - perhaps even fascinating - life forms. Our resident Mother Duck uses the open canals in back of the building for foraging and for swimming lessons for her annual brood.

The drain along the side of the building by the entry door, however, is usually a weed-choked waterway of questionable aesthetic appearance. We have a plan whereby that "canal" could be covered by planter boxes of flowers which would make a year-round improvement in the appearance of our entry area. Each box, built from scrap lumber, will be portable by means of a hand truck and will be watered by a drip system, so maintenance will be minimal. But we need quite a few boxes. We need some handy type people to build them for us.

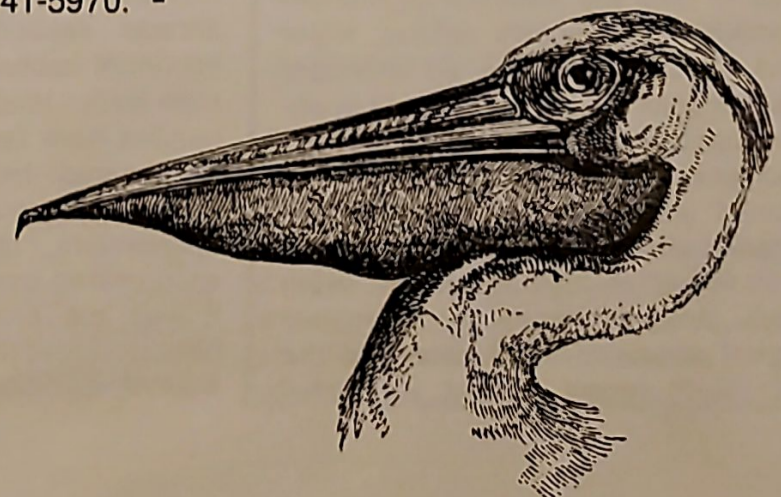
If you can help with this project, please give the office a call and let us know. We'll send you a set of plans plus information about where to find the scrap lumber pile at the office. ■

STATE OF THE BAY CONFERENCE

The San Francisco Bay Chapter of the Oceanic Society will hold its third State of the Bay conference on Saturday, March 7, 1987 at Golden Gate University in San Francisco from 9:00 a.m. - 5:00 p.m. The conference will feature outstanding environmental writers and reporters presenting important updates on environmental quality, socio-economic impacts and political realities.

Congressman George Miller will be a featured speaker on the topic, "Water Politics and the Future of the Bay". Other presentations will be made by outstanding environmental reporters and writers, including Harold Gilliam, author and writer with the San Francisco Chronicle; Marc Reisner, author of the Cadillac Desert; Lee McEachern, environmental reporter with KGO - Channel 7 News; and Carol Benfell, environmental writer with The Tribune. A representative panel of experts will respond to each presentation.

For more information, call the Oceanic Society at (415) 441-5970. ■



Preserving Marine Ecology: Cordell Bank, Sanctuary, and You

by Evan Steele

"What we saw on that day absolutely astonished us," exclaimed Robert Schmieder, as he recalled his first expedition to the mysterious seamount 20 miles west of Point Reyes in Northern California known as Cordell Bank. Today much more is known about Cordell Bank, and the rich ecological character of the region has led many to call for its establishment as a National Marine Sanctuary. The issue raises many questions regarding the history and geography of the region, the ecology of the region, the nature of a National Marine Sanctuary, the selection process involved in Marine Sanctuaries, and the potential adverse effects from leaving the region unprotected.

The underground island of Cordell Bank sits on the very edge of the continental shelf, and has an area of approximately 22 square miles. Nautical charts show that on the west side of the bank there is a steep slope where the seabed drops to 10,000 feet deep in the space of a few miles. On the east, however, there is shallow water with a maximum depth of 360 feet.

The seamount of Cordell Bank has been formed by the northwestward movement of the Pacific plate over the last 60 million years. At the end of the last ice age, about 10,000 years ago, when sea level was 300 to 400 feet below its present surface, Cordell Bank was probably a large island about 9 miles long and 4 miles wide, separated from the mainland by a narrow strip of shallow water. For a time, it may even have been possible to walk on dry land from Point Reyes to Cordell Bank. The first noted discovery of the Bank was by George Davidson of the U.S. coast and Geodetic Society on Oct. 20, 1853. In June of 1869, the Bank was rediscovered and mapped by Edward Cordell. Until the invention of modern equipment, the strangely colored water around Cordell Bank was an important navigation point for captains caught in off-shore fog. Since 1978, Cordell Bank Expeditions, a nonprofit organization dedicated to the exploration and description of the site, has carried out an annual series of high resolution depth surveys and scuba dives to obtain biological specimens and photos of the area. Such recent interest in Cordell

Bank led to the beginning of the process for designation as a National Marine Sanctuary.

The Biological community at Cordell Bank, according to a National Oceanographic and Atmospheric Administration (NOAA) report is "exceptionally vigorous, supporting the entire food chain." The California current sweeps southward over the Bank, carrying away debris and bringing clean, clear, cold, nutrient-rich water to the shallow Bank. This current coupled with the unusual depth that sunlight penetrates support a thriving community of lower organisms in the region. At the bottom of the seamount are found a wide variety of sponges, anenomes, hydrocoral, tunicates, and hydroids. The organisms are very brightly colored with reds, yellows, whites, and pinks in profusion. Rare, uncommon species of sea fauna have been discovered in the region, and many new taxa, genera, and species have been discovered as well. In all 171 genera and 137 species of fauna have been discovered to date, with some of those still unidentified.

Due to the waters' clarity, photosynthesizing organisms support a vast and complex food web that includes fish, birds, and mammals. Cordell Bank supports a thriving community of fish, and has long been known as a superb fishing area. Groups of rockfish congregate around the pinnacles so thickly that Robert Schmieder once said, of exploring the region "it was like swimming through a blizzard of fish." In addition to rockfish, sportfishers regularly catch lingcod, yellow tail, salmon, albacore, and shark.

Like rockfish, seabirds often congregate in hundreds around Cordell Bank. The rich biological production of the region attracts seabirds and serves as an important habitat and feeding ground for such birds. Well over 30 species from 11 families have been sighted, including the endangered brown pelican. Feeding flocks of several species of gulls and shearwaters have been routinely encountered over Cordell Bank. Indeed, it was the presence of seabirds that helped Cordell first locate the Bank during a survey expedition.

In addition to marine fauna, fish, and seabirds, Cordell Bank also serves as an important habitat and feeding ground for many marine mammals, including several endangered species. Numerous species of marine mammals have been sighted at Cordell Bank, including whales, porpoises, dolphins, sea lions, and seals. The same rich biological community that attracts and supports seabirds also attracts and supports marine mammals. Staff at the California Marine Mammal Center have concluded that Cordell Bank constitutes a significant location for feeding and residency for numerous species of marine mammals. According to a 1981 study, Cordell Bank is one of several areas where California sea lions, stellar sea lions, and northern fur seals were found in greatest abundance and concentration. Migrating gray whales have also been sighted on the eastern edge of the Bank. Two species of endangered marine mammals, the great, majestic humpback and blue whales, make extensive use of Cordell Bank and the continental shelf during autumn and summer. Indeed, as a Cordell Bank Expeditions report stated "the diversity and abundance of marine mammals in the Cordell Bank area are striking."

What is a Sanctuary?

Given the rich ecological community of Cordell Bank, its designation as a National Marine Sanctuary appears necessary, but what is a "Sanctuary," and how will it benefit Cordell Bank? Established by the Marine Protection, Research, and Sanctuary Act of 1972, the Sanctuary program is administered through NOAA and the Dept. of Commerce. The stated purposes of a sanctuary are to (1) enhance resource protection; (2) conduct research; (3) enhance public awareness; and (4) encourage multiple use. To date 5 such sanctuaries exist, 3 on the east coast, one in Southern California at Channel Islands, and one in an area adjacent to Cordell Bank encompassing Point Reyes/Farallon Islands. Taken as a model, the Point Reyes/Farallon Islands National Marine Sanctuary has been an enormous success. Restrictions on substance discharge, alteration of the seabed, sea vessel navigation, overflights, and other activities have

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Cordell Bank

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protected the area, and is facilitating the return of many marine organisms to the area. In addition to protection, the Sanctuary program has sponsored numerous research activities, including research that has shed light on the Cordell Bank area. Public awareness regarding Point Reyes/Farallon Islands has been raised through publications and, recently, through an educational poster developed by the local Sanctuary program and the Whale Center. The Whale Center also sponsors outings to the Sanctuary, where whales are often sighted.

What is the price of inaction?

What, then, is the price of inaction? What are the stakes? What will be the fate of Cordell Bank if left unprotected? Though recent plans for California have not included Cordell Bank, the prospect of offshore oil drilling in the area is still alive. Offshore oil activity poses serious threats to all marine organisms and could seriously harm the fragile ecosystem of Cordell Bank. The most obvious danger of drilling in a region is the prospect of massive amounts of oil being released into the ocean. Through accidents, and well blowouts, in which drilling pressure causes wells to burst and release oil, many toxic substances are released into the marine ecosystem. The effects of such releases are numerous. Lower organisms can be destroyed or smothered and toxics can be consumed by photoplankton and zooplankton, only to be converted, within the organisms, to a substance with higher toxicity. Marine birds are often the most visible victims of an oil spill through the disturbance that oil causes to their feathers. Many can no longer fly and may drown. The effects of oil on marine mammals are still somewhat unclear; however, studies indicate that oil can have adverse effects on skin, serve as a migratory obstacle, disturb breathing and locomotion, and poison marine mammals through ingestion of lower organisms laden with toxics.

In addition to the dangers of released oil, offshore oil drilling involves the use of muds and cuttings that have been shown to contain a plethora of toxic substances. A 1984 California Coastal Commission report stated that "The cumulative effects of all OCS [Outer Continental Shelf] muds and cuttings discharge could result in

significant chronic or sublethal effects on those organisms which are directly related either ecologically or economically to the coastal zone."

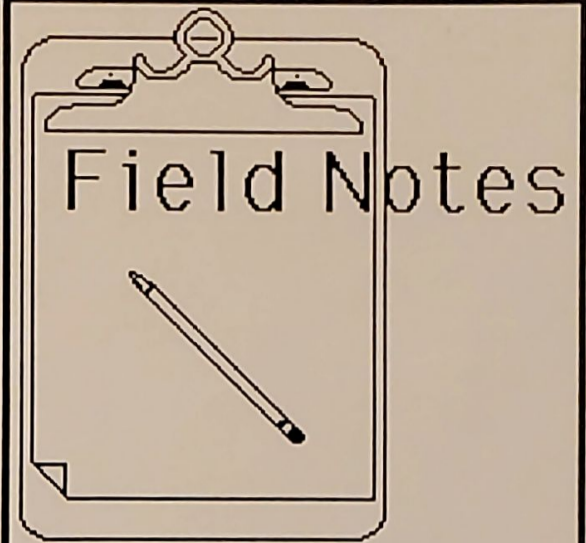
Another danger that would face an unprotected Cordell Bank would be potential damage to the seabed. Dredging for pipeline construction significantly disturbs the ecology of the sea bottom and its designation as a Sanctuary would protect Cordell Bank, as it has Point Reyes/Farallon Islands, from disturbance of the seabed.

Perhaps the most compelling reason for designating Cordell Bank as a Sanctuary is the vast amount of experience and knowledge to be gained from research and education. The unique qualities of Cordell Bank and recent discoveries of new and rare organisms point to an exciting area of knowledge.

The next step is yours. If Cordell Bank is to be protected and nurtured, the public must be concerned and involved. Currently, concerned groups await the issuance of a Draft Environmental Impact Report from the Commerce Department regarding the Sanctuary. Soon after issuance, a public forum will be held. This forum will be a vital part of the Sanctuary process and your participation will be essential. Attendance at the forum and/or letters supporting Sanctuary will be vital in sending a strong message to the Commerce Department. Don't let the wondrous ecosystem of Cordell Bank fall prey to dangerous and disrespectful exploitation. Watch for announcement of the public forum and help us protect and learn from, the majesty of Cordell Bank. ■



DONATIONS. . . Thanks to Elsie Richey, Terry Hart, Crystal Woodin and Pat DuBois for the refreshments for the December General Meeting.



Canadian Geese Sightings

Artesian Slough

May 23, 1986

While censusing the Great Blue Heron rookery in Artesian Slough, two adult Canadian Geese (*Branta canadensis*) and 3 downy young were sighted approximately 200 meters down stream from the Heron rookery. This same group was seen again on June 18 by Peg Woodin, Kathy Hobson, and Dave Johnson.

Alameda Creek

June 22, 1986

On Alameda Creek, northwest of Union City, 6 pairs of adults and 20 young were seen. 5 pairs of the adults had young. Of the 20 young 17 were in juvenile plumage and 3 were still downy. On August 17 there was a second sighting in this same area of 2 adults and 4 immatures in flight.

Coyote Hills Regional Park

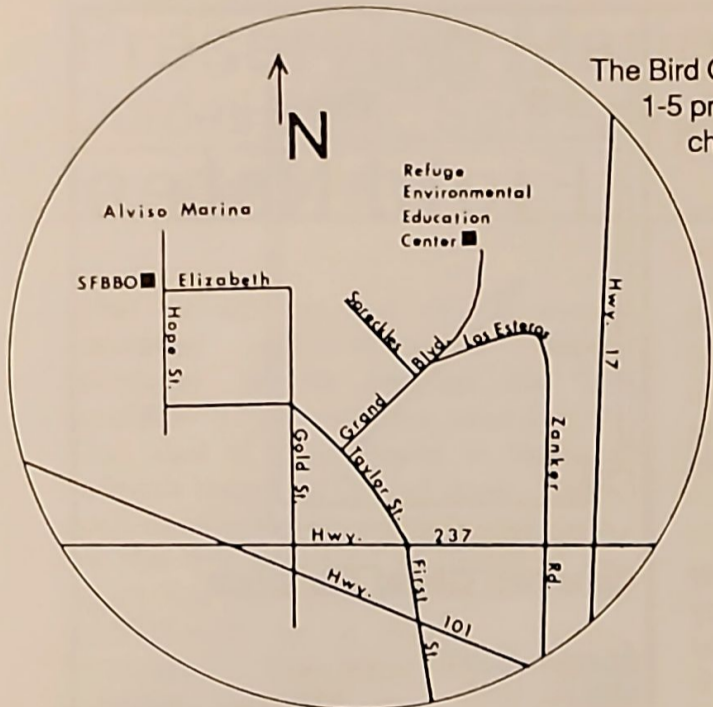
May 17, 1986

Peg & Crystal Woodin observed an adult pair and 6 downy young northeast of Coyote Hills Regional Park. David & Roberta Seals, Rick Palmer, and Peg Woodin observed a second sighting of this same group on May 24. The geese were seen swimming in Coyote Hills Slough.

Lake Elizabeth, Fremont

Over 140 adults have been counted this year on Lake Elizabeth. They nested on an island in the lake that has no public access. This year approximately 100 chicks were counted.

FIELD NOTES is a new feature of the Bird Observatory newsletter. You are invited to contribute to this column along with maps, drawings or pictures and it will be included space permitting. If it's important enough for you to write down in your field notebook it's of interest to other birders.



The Bird Observatory office is located at 1290 Hope St. in Alviso. The office is open from 1-5 pm weekdays and some weekends. But before stopping in, call (408) 946-6548 and check the schedule.

The General Membership meetings are held on the first Thursday of the month at 7:30 pm at the San Francisco Bay National Wildlife Refuge Environmental Education Center in Alviso. (see map) The Board meetings are open to the membership and are held monthly. Call the Observatory for dates and times.

The newsletter deadline is the first Monday of the month. Send contributions to the editor: Susie Formenti, 16675 Bucksin Ct., Morgan Hill, CA 95037.

The San Francisco Bay Bird Observatory is a non-profit corporation under IRS statute 501(c)3. All memberships and contributions are tax deductible.

GENERAL MEMBERSHIP MEETING

Thursday, February 5, 1987

7:30 p.m.

San Francisco Bay National Wildlife Refuge
Environmental Education Center in Alviso

FEATURED SPEAKER: Lou Young

TOPIC: There will be a short instructional film on, "How to Wash Birds" that was a collaborated effort of Kathy Hobson, Jay Holcomb, Dorothy Johnson and Lou Young.

Following this film Lou will present his (home movie) vignettes of the February 1986 Oil Spill clean up operation at Agnew State Hospital. If you volunteered your time during the clean up, then there is probably some footage of you. Come and be reminded of some of their finest hours and some of their most ludicrous moments.

Editor, Susie Formenti



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I would like to join Renew my membership in the
San Francisco Bay Bird Observatory

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE (____) _____

Make checks payable to SFBBO. Your gift membership is tax deductible.

Student/Senior	\$10
Regular	\$15
Family	\$20
Associate	\$50
Contributing	\$100
Sustaining	\$200
Life	\$400 *
Patron	\$2000 *
Corporation	\$500 +

* Single payment becomes part of an endowment fund.