Marine Reserve Could be in Jeopardy According to County Parks Director

As the Fitzgerald Marine Reserve approaches the Twenty-Fifth year of operation, its importance as a refuge for the diversity of plant and animal life that resides in its tidepools has never been greater.

Commenting from his office in Redwood City, Pat Sanchez, Director of Parks & Recreation for San Mateo County, is well aware of this fact and said that the reserve at Moss Beach could be in jeopardy.

"We need to raise the consciousness in this county to the importance of the marine reserve," he said. "In this respect the master plan for its protection must go forward to insure that this resource is here for years to come."

The development of a master plan for the reserve is the responsibility of the County, Sanchez said, and will require $60,000, a sum not now available. He noted that without a master plan there would be little interest in support for money to protect the tidepool resource.

"The problem is that it's a dollar and cents issue," he added, "and the reserve is a part of the park system and must be included in each review of budgets."

He acknowledged appreciation for the efforts of Friends of Fitzgerald Marine Life Refuge and docents cover such concepts as biodiversity, habitats, adaptation and intertidal food chains.

Interested teachers should call the Marine Reserve, 728-3584 for more information.

One Day Workshop Offered Teachers At Farallone School November 12

The Friends of Fitzgerald Marine Life Refuge, in cooperation with the San Mateo County Park Division, San Francisco State University, and the Coyote Point Museum, is offering a workshop for teachers interested in utilizing the intertidal at Moss Beach as a teaching resource for their students.

The one day class will be given on November 12, with a morning lecture/lab/discussion at Farallone View School in Montara, and an afternoon field trip to the Marine Reserve in Moss Beach.

The six-hour workshop will be taught by Tom Niesen, San Francisco State, and Bob Breen, supervising naturalist at the reserve. The class will
JUNIOR RANGERS HAVE FUN LEARNING ABOUT MARINE LIFE AT THE RESERVE. The photos above show them in the process of pulling seining nets to study fish and fauna uncovered in seaweed when they are brought in to shore. In addition to examining marine life at the reserve the youngsters, ages 9-12, explored life science concepts that form the basis of understanding the natural world. Much of the training included the curriculum, Biological Diversity, prepared by the National Service and Minnesota Department of Education.

Seashore Docent Training Classes
Begin at Coyote Point Sept. 15

The Twenty-Second Annual Seashore Docent Training class will be offered this year through the Coyote Point Museum for those persons interested in teaching at the Marine Reserve. The classes will begin on September 15, and will be conducted from 9 a.m. to 12 noon.

For people who want to become involved as volunteers at the Marine Reserve and share knowledge with hundreds of youngsters on classroom field trips, this training will provide a rewarding opportunity. Seashore docents at the reserve give tidepool programs to nearly 5,000 students annually.

The thirteen week course will be taught by Bob Breen, supervisory naturalist at Fitzgerald Marine Reserve who has been teaching the class since its inception in 1972. At the present time there are 50 active docents. Last year they gave more than 500 tours to students representing schools from all over the bay area.

ADDITIONAL ZIP REQUIRED OF FFMLR MEMBERS

Effective January 1, 1995, recipients of mail from non-profit organizations must include with their five - number zip code the additional four numbers that were previously assigned to all areas in the U.S. You can get the four digits required by phoning your local post office. If you are a member of FFMLR receiving this newsletter through the mail, please complete the information below and return this sheet to:

Fitzgerald Marine Reserve,
PO Box 451
Moss Beach, Ca., 94038

NAME ____________________________________________

ADDRESS _______________________________________

(Example) ZIP: 99999 - 0000 (Fill in the four digits)
CHECKING WILDLIFE HABITAT on a tour of Frenchman's Reef is Park Ranger Tim Sullivan, center, as he checks bird identification for an interested group of visitors.

Rare Couvier's Beaked Whale Found Stranded on Beach at Seal Cove

By Tim Sullivan, Park Ranger

Last month the Academy of Sciences of San Francisco held an enrichment tour for the participants of the "Beach Watch" program. The main theme of the evening was how to identify marine mammals by looking at their bones. The tour ended with a question from one of the participants: "What animal that we might find on the beach would be number one on your wish list?" The answer was a Couvier's Beaked Whale.

The next day, an anonymous person left a message on the answering machine at the reserve that there was a dead whale at the north end of Frenchman's Reef, just south of the Moss Beach Distillery. Park Aide Ellen Gartside went to investigate and found a whale she had never seen before. She called the Gulf of the Farallones National Marine Sanctuary Office and spoke with Jan Roletto, the Beach Watch Program Coordinator. Jan gave Ellen a few key field identification characteristics to look for. Ellen returned to the whale and found it to fit the description of a Couvier's Beaked Whale.

Izzy Szczepaniak, a scientist from the Academy of Sciences, arrived and confirmed the identification of the whale and called a team of academy biologists who performed an autopsy. They found the whale to be a two or three-year-old female, approximately 13 feet long with a six and half-foot girth. The animal did not appear to have suffered any trauma and the cause of death was undetermined. They removed most of the fat and skin and took the skeleton to the academy.

Cuver's Beaked Whale, or the Goosebeaked Whale, is thought to be the most abundant beaked whale in the world.

During the recent budget hearings which resulted in the elimination of two rangers instead of four as had originally been planned. He said the board of supervisors was willing to continue to fund the same level of service at the reserve.

In reference to the increase in visitors to the tidepools, he emphasized that implementation of a master plan will require the help of many people, including the Friends of Fitzgerald Marine Life Refuge, docents, neighbors in the vicinity, and others.

"I'm encouraged by the increase of visitors to the tidepools each year," he said, "but discouraged because of the lack of a master plan to help manage the increased numbers."

Asked if protection of the reserve should include the denying of access to the public, he replied, "That is not an option I would support at this time. I welcome the increase of visitation to the tidepools so long as we can effectively manage its protection. We must find ways to accomplish this objective."

Formerly responsible for parks, community services, and public works in the City of Oceanside, Sanchez came to head the Parks & Recreation Department of San Mateo County in October, 1993, replacing David Christy, who retired.

SANCHEZ (cont. from page 1)
Algae can be divided into three groups based on its color: green, red, and brown. Green algae are commonly seen in the high intertidal and shallow inshore areas. A common green algae at Fitzgerald is *Cladophora columbiana* which grows in round, spongy clumps and resembles a woodland moss. Another high intertidal green algae is *Ulva sp.*, commonly called "sea lettuce." A large patch of "sea lettuce" can be found just below the main entrance to the tidepools.

The red algae are the most numerous in the intertidal zone. One of the more conspicuous genera (groups) is *iridaea sp.*, or iridescent algae. Members of this group occur in all zones of the intertidal, however the most spectacular is a species found in the lower intertidal which appears as long, tapering blades (Fig. 1a). The complex structure of its outer cell layer causes light to be refracted as if passing through a prism. This causes a beautiful iridescence as the blades wave in the tidepools, which many visitors sometimes mistake for oil in the water.

Another well-represented genera of reds is *Gigartina sp.* A favorite is *G. Exasperata* (Fig. 1b), commonly called "turbanish towel" or "Neptune's washcloth" since its texture resembles that of a bath towel due to the numerous papillae or bumps covering its blades. This is usually found washed up on the beach since it occurs in the low intertidal/subtidal zones. *G. papillata* is a smaller species also covered with papillae which can be found in the high intertidal zone (Fig. 1c).

Visitors to the tidepools often comment on the pretty pink coral found in the lower tidal pools. This is actually another red algae which belongs to the group generally called "coralline algae". This group has the ability to incorporate calcium carbonate into its cell walls which gives it structural rigidity and also acts as an herbivore defense. This group has two growth forms, an upright articulated form (Fig. 1d), and an encrusting form seen on rocks and shells. A bright lavender pink color when living, dead pieces become bleached white and appear even more coral-like when seen in the tidepools.

The giant kelps are brown algae and live subtidally, although specimens of "bull-whip kelp" (*Nereocystis sp.*), "bladder kelp" (*Macrocystis sp.*) and "feather boa kelp" (*Egregia sp.*)(Figs. 2a-c) may be found washed up on the beach. A brown algae which is seen in the high intertidal is "rockweed" (*Fucus sp.*, Fig. 2d) which is an olive-green color and well adapted to exposure during low tides.

This has been just a brief introduction to the 134 different species of algae found at Fitzgerald. *Seashore Plants of California*, by Dawson and Foster, and *Marine Algae of California* by Abbott and Hollenberg are two excellent books to consider if you wish to pursue the identification of these incredibly diverse and fascinating marine organisms.
Stellar Sealion Reserve Visits Decline
As Sea Otters Begin a Comeback

By Bob Breen
Supervising Naturalist

During the past few years there has been justifiable concern about declining marine life forms at the Marine Reserve and the effects of human impact upon biodiversity at Moss Beach. This is an especially serious question since as a refuge the expectation is that at a sanctuary living things should be found in abundance. Unfortunately, there are forces that are beyond our control that act to alter the numbers and kinds of things that can be found at Moss Beach.

Late in June this year we were just completing a morning session for our Junior Ranger class and were heading down the beach at Seal Cove below the Distillery Restaurant when we saw a sea otter in the cove about 150 feet offshore, rolling and diving in the smooth, shallow water of the cove. The youngsters (ages 9 to 12) in the class were thrilled. This incident made me stop and think. Sea otters are now making a comeback in the reserve, yet another, larger and spectacular marine mammal has not been seen by us in Moss Beach waters for more than 15 years.

Twenty years ago Stellar's sea lion was a common visitor here in the summer and fall months. It could be seen in the ocean off the marine reserve's beaches, surfing the waves below Cypress Point and occasionally snoozing on the beach at Seal Cove. The appearance in the summer of this large, aggressive sea lion (the males weighing more than a ton) was awaited by staff and visitors with some anticipation. Usually a large Stellar is given a wide berth when it is on the beach. However, on one autumn Sunday in 1978, a 1200 pound male was taking it easy on the beach at Seal Cove when it began to attract a crowd. As the numbers of visitors became larger, and their circle around the sea lion became tighter, this Stellar's bull suddenly became more alert and awoke to find itself surrounded by about 30 people. Without warning the sea lion jumped up, did a 180 degree turn and galloped off toward the ocean. At this time the seal was moving at a rate of a person doing a fast jog. At nearly the same instance the 30 or so visitors leapt in unison, creating a large gap in the circle and allowing the sea lion to escape.

In the last 30 years Stellar sea lion populations in the North Pacific have suffered catastrophic declines. Since 1965 populations have declined eighty percent. Populations at the Farallones and Ano Nuevo Island have declined ninety percent. In the past nine years total populations in the North Pacific have plummeted from an estimated 290,000 to about 67,000 animals. There is so much concern about Stellar populations that the species was placed on the "threatened" list in 1990. The status of the populations is again being reviewed this year, and if there have been further declines the species will be placed on the endangered list.

Many possibilities for this decline have been examined. Certainly factors such as predation, disease, shootings and net entanglements are a factor. However, it is now thought that loss of food source abundance is the major factor in Stellar sea lion decline.

Physiological studies indicate that juvenile survival is the most likely problem. As the fishery in the North Pacific for walleye pollock has increased, the population of Stellar sea lions have decreased. Walleye pollock are the favorite food items of Stellar's and inexperienced juveniles are unable to compete with adults, or other species for such a scarce resource.

At the present rate of decline computer population models predict extinction within twenty years. It would be a shame and a pity not to be able to again observe these magnificent marine mammals on the beaches of Moss Beach.
TIDEPOLL TIDBITS

The San Francisco Peninsula Parent magazine, a monthly publication for parents in San Francisco and on the Peninsula, recently conducted a survey of its readers who selected the Fitzgerald Marine Reserve as winner of the Peninsula Parent Seal of Approval. In a letter to the Reserve, the editor stated:

"Congratulations! You have been selected as the winner of this year's San Francisco Peninsula Parent Seal of Approval. In a survey our readers were asked to supply us with their favorite family-friendly spots in a host of categories ranging from beaches to birthday parties. We hope you will display the certificate we have awarded you proudly."

The Friends of Fitzgerald Marine Life Refuge and the Marine Reserve will be the recipients of a benefit given in September by the Genentech Corporation of South San Francisco. The Marine Reserve will be one of two organizations honored by Genentech, which annually hosts a fund raiser for environmental organizations. The Friends of Fitzgerald Marine Life Refuge and Marine Reserve were nominated by Ms. Shirley Ortega, a frequent visitor to the reserve and an employee of the bio-engineering company.

The Alan Balsam Foundation has announced that it will award a gift of two thousand dollars to the Pillar Point Marsh Bird Sanctuary. The Foundation sponsors environmental programs. At the present time the County is in the process of surveysing the wetland boundaries of the sanctuary prior to purchase of the property from the original owners.

An orca whale was sighted at the Marine Reserve in June by Mr. Liberto Cracchiolo, of Daly City. Mr Cracchiolo was fishing in kelp cove near the main entrance to the reserve when he spotted the orca about 200 yards offshore pursuing some sea lions that had been in the area.

A photography exhibit by Elaine Eisenberg, tidepool docent, will be on display at the Coyote Point Museum in the North Gallery from September 27 to October 6. The exhibit is divided into three areas that represent Coyote Point Museum's outdoor classroom instruction.

Volunteers are needed to assist the Department of Health Services in locating samples of toxigeneic marine phytoplankton which remain widespread along the California coastline. The toxic bloom of this plankton is associated with increases in PSP toxicity above the alert level in shellfish.

Volunteer workers will be provided with field microscopes and the necessary training (along with reference specimens) to identify the two species of toxin producers. Interested persons should call Gregg Kabgkius at (1-510) 540-3423.

LOOKING BACK

(On November 1 of this year the Fitzgerald Marine Reserve will have been in operation 25 years. Bob Breen, supervising naturalist at the reserve, became its first county naturalist. In this article Bob looks back to that time and reports what it was like then as compared to the busy place it is today. Ed.)

When driving the gravel roads of Moss Beach in early 1969, one was always struck by the thought of how rural the area was, a few houses along Nevada and Virginia streets and more down California on the way to the beach and tidepools. Even as late as 1969, Montara mountain was a barrier isolating Moss Beach, giving it the look of present day Pescadero with its open fields, dotted with thick clumps of bushes and cypress trees. Although some of the homes were post war dwellings, many were built in the 20's and 30's, bestowing a feeling of benign neglect and quietude.

The tidepools at Moss Beach were well known by teachers and scientists and other aficionados who would come down to enjoy the beach and reef. Most came to pick abalone (abalone were still easy to get), to fish or pole for eel. Others collected for food or curios, as they had for nearly seventy years. During the early months of 1969 there were no laws in existence that protected life in the tidepools. The very idea of protecting snails and sea stars had a long way to go before it could gain popular acceptance. There were, therefore, more than a few astonished looks when it became known that in a few months we would begin to protect the things that occurred in the tidepools.

The advisory sign which had been in place that year until it was replaced on November first was, in many instances, ignored. At that time Moss Beach was a focal point for those collecting tidepool life for food. Limpets, chitons, sea urchins, turban snails and even sea anemones were common items found in cardboard boxes, burlap sacks and plastic garbage bags being carried off the reef.

By the time that November 1 rolled around we had a pretty good idea that from that day forward we were to have our work cut out for us. For the rest of the year, and through 1970, there were more than 800 incidents of persons illegally removing intertidal life for food, aquarium specimens, or curios. One person had 42 ochre stars he planned to boil, hang out to dry, and put on family room walls.

Aside from the illegal collecting problems the pace of existence at the Marine Reserve was much slower then. Weekdays there were very few visitors, while on weekends only a few hundred each day. Children on classroom field

Please turn to page 7. See Breen.
By Virginia Welch
(FFMLR Board President)

I would like to thank all of you who wrote or called the Board of Supervisors during their recent budget hearings. You did make a difference! The Parks and Recreation Division had proposed to take a cut of four rangers in the 1994-95 budget. The final budget cut two rangers instead of the proposed four. Unfortunately further cuts are proposed in 1995-96. The parks have taken cuts the last three years and have gone from a 70 division staff in 1987-88 to 57 in 1993-94. At the same time visitation has gone from 1,650,000 to 2,193,000, an increase of seventy-five percent. The staff has done a fantastic job, but more cuts will have a drastic effect. I encourage all of you to keep track of what is happening in the county and be prepared to communicate your concerns to your supervisors.

Recently I received a letter from Patrick Sanchez, Director of Parks and Recreation. He expressed the appreciation of the Department for the efforts extended by the Friends and docents during recent budget hearings. He said the Board of Supervisors indicated that they are willing to continue to fund the same level of service at the reserve. However, the reserve is a part of the park system and must be included when they review budget impacts.

Mr. Sanchez has also encouraged all of you to write to him with any suggestions to reduce costs and/or increase revenue. His address is: Parks & Recreation Division, 490 Hamilton, Redwood City, Ca., 94063.

I would urge all of you to consider becoming tidepool docents and encourage your friends to join. The Museum needs 91 docents to serve the number of tours done previously, and they currently have only 37 active weekdays when all the schools come. The docent training class will start on September 15. Call the Museum, 342-7755 for further information.

Welcome new sponsor member, Harbor Seal Co. (Voropaeff & Young)
A great find at the tidepools the other day! Cruising along rather close to shore one of my group of six graders spotted a crab, a rather unusual looking crab, and indeed in a rather small tidepool was a large kelp crab. Close observation showed the large male crab to be on top of, and clinging to (embracing, if you will) a smaller female kelp crab, so, feeling quite excited about such a good find I began explaining that they were mating, that crabs have separate sexes, and the female will carry many eggs. All eight youngsters were quite interested in the proceedings.

In order to show the students the scarlet red underside of the mating male kelp crab, I carefully and gently grasped his shell and slowly lifted and tilted him (and his mate, because, of course, he was holding her tightly) to the surface of the shallow water. I emphasize that I did this very carefully because kelp crabs have sharp spines on their legs to help hold them to seaweed in the face of wave shock, and those legs can reach backward. Years ago I incautiously grasped a kelp crab and learned quickly how painful these spines can be. It’s a mistake you make only once. As Ed Ricketts describes, "Most crabs can be grasped safely by the middle of the back but the safe belt in the kelp crabs is narrow, and he who missed it on the first try will pay the penalty."

My heroics now aside, the students OOO-ed and Ah-ed at the brilliant red underside briefly exposed and then I eased the pair of crabs back to their place with relatively little disruption. Then we noticed a second pair of crabs in the same small pool engaged in a similar fashion. As we walked away from the tidepool one of the girls who at the beginning of the tour had stated many times that she didn’t want to touch anything and didn’t want to walk on anything including sand or rocks, had been a close listener and observer of the scene and remarked to me, "It’s a shame to disturb them when they’re doing that!" I said, "Yes, that’s why I tried to cause as little disruption as possible yet still give the group a chance to see this great find. And the process will go on for two days," hoping that this explanation justified my actions to her obviously sensitive response. Unconvinced, she replied scoldingly: "Would you want to be disturbed when you’re doing that?"

Kids are great!