

THE VIP VOICE

MARCH-APRIL 2000

THE NEWSLETTER OF
CABRILLO VOLUNTEERS

Dear Tidepoolers:

I apologize for getting the March VIP Newsletter out late, but too much time has gone into producing this one. Thus, we will combine March and April into one issue. I do urge any of you that have an interesting tidepool story, know something about one of our critters, have some expertise on the geology of the tidepools or growth that is native to the area to

speak up. If you're not comfortable with writing, put the information in some relatively recognizable

form and I will edit it. Not to put too fine a point on it, we really need some of the variety and expertise the rest of you can offer.

Though there have been several days of cool, cloudy skies and a few days of pretty good rain, it hasn't kept the public out of the tidepools. I worked one of the rainier days and thought I'd wind up sitting in the car reading and watching the tumultuous ocean. That, however did not turn out to be the case. Folks just jumped out of their cars and headed for the tidepool area. Some, I'm sure, just came to watch the amazing ocean, but others were looking to see what the weather would do to the tidepools. After 3 hours, I went home and jumped into a really hot tub and had a cup of hot chocolate, but I felt wonderful experiencing the wonders of our tidepools in the heavy rain and chill. I had viewed the tidepools in a different light. I know lots of you just work in all kinds of weather (neither rain, nor snow . . .) like the mailman and never complain. You're terrific.

There has been more than one suggestion that the tidepool VIPs should meet on an optional basis each month or so to hear a

speaker or learn something new or simply let the Tidepool Committee know of your concerns or what's going right. I'd like to know how each of you feel about the suggestion. If it is something that you think you might attend more than half of the time, please drop a note into my blue folder indicating you're interest. It would give us an idea of how many would show up. I will give the results to Bonnie Becker who can take it to the Tidepool Committee.

I think all the news has been covered. Please read the Announcements section. I'm optimistic that I will hear from some of you regarding meetings, suggestions, articles, help with Adobe Page Maker, bulletin board caretakers and the like.

Enjoy April as the weather gets better and better, and you'll hear from us in May.

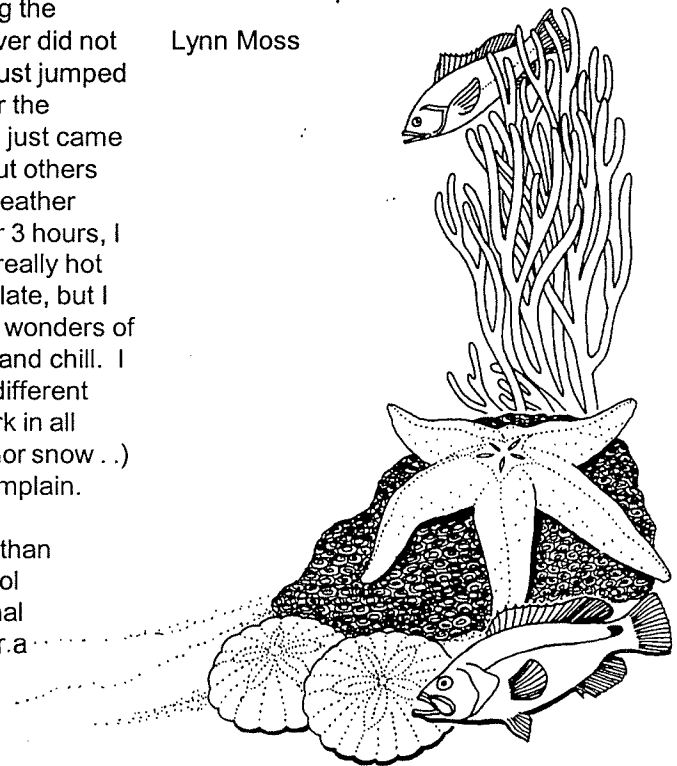
Lynn Moss

MUSSEL EDITION

*With considerable
concern for Cabrillo's
Tidepools*

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WONDERFUL MUSSELS

*and what they are
by Lynn Moss with
help from Bonnie
Becker*

**In this issue, look for
Bonnie's data on
Mussels in Mussel
Plots**

California Mussels

*"...teardrop-
shaped, thick, and
covered with a
tough brownish
periostracum..."*

4 lbs. mussels
1 leek (white part only), washed well,
patted dry and thinly sliced
1 cup diced (1/4 inch) fennel bulb
1 tablespoon finely minced garlic
1 cup dry white wine
2 cups . . .

OOPS! This isn't the "Bon Appetit"
article. Let me begin again.

Many people think of mussels as freshwater clams, but in reality mussels are bivalve mollusks that are found in both fresh and salt water. Our local mussels are in the family Mytilidae and prefer attaching to rocks instead of burrowing into sand. They begin life as big eyed, wandering larvae that live in the water column and float around with the currents. At the end of their larval stage, they attach themselves to rocks and become adults that move very slowly, if at all. Like barnacles and sponges, mussels are filter feeders with water washing millions of food particles through their siphons. They are fre-

quently found competing in the surf zone for space on the rocks with many species of plants and animals. When successful, they attach themselves by means of strong hairs called byssal threads (the cook calls them the "beard"). If the mussel feels too crowded and isn't wedged in between other mussels too tightly, it can voluntarily dissolve the byssal threads and move to another rock. The California mussel's range is from the Aleutian Islands to the southern tip of Baja California.

The California mussel is not as good to eat as the bay mussel, considered by many a delicacy. The California Department of Health quarantines mussels and many other filter-feeding bivalved mollusks between May 1 and November 1 since in the warmer months, the mussel filters microscopic organisms (*Gonyaulax catenella*) and concentrates toxin from the organism in their tissues. Life Between the Tides describes the California mussel as "...teardrop-shaped, thick, and covered with a tough brownish periostracum, which is usually worn off in places. The underlying surface coloration is purplish black, and the deeper layers are white. The shells are sculptured with weak radial ridges and irregular, heavy concentric grooves. Southern California specimens are commonly between 3 and 5 inches long, with some occasionally reaching 7 or 8 inches."

Bay mussels like quiet water in sheltered areas, and can often be found in big groups in the low intertidal zone. They affix themselves to the bottom of boats and mooring lines as well as pilings and rocks. Wedge-shaped, they are thin and have a shiny black periostracum. In contrast to the California mussel, they are smoother and smaller (3 or 4 inches).

The tiny (about 1 inch), solitary Platform mussel, often referred to by its scientific name "septifer," is usually found under rocks in the low intertidal zone. Their ridges radiate outward and they, too, are purplish black. Inside these small mussels are "shelly" platforms attached to each valve — thus the name. They have been seen from mid-northern California to Baja (continued on page 3, column 2)



TIDEPOOL TIDBITS

by Bonnie Becker

**This is your chance
to help by involving
the public**

Hi VIPs!

If you have been down to the tidepools lately and are observant, you have probably noticed something strange. There are tiles, brushes, and scrub pads bolted to rocks. With the help of another park marine biologist from Channel Islands National Park, I have installed a number of "settlement plates" in the intertidal. These are for collecting settling larvae of different plants or animals. The surfaces mimic natural surfaces that are favorable for baby organisms, so they will settle on the bristles, fibers, and pores and start to grow. I have put the tiles out to target barnacles, and the brushes and sponges are for mussels. But there will probably be many more species landing on these at different times. Every two weeks to a month, I will go out and remove the plates and put a new one in. I will then take the old plates up to the office and look at what I caught under the microscope. This will help me plan my future studies. In science we call this a "pilot study," not unlike a "pilot episode" on TV.

What can you do to help? Please try to stop people from stepping on or disturbing them. The plates are very obvious and people will surely be asking you about them. This provides a great opportunity for you to do some interpretation and get the word out to the public that we are concerned about the health of the tidepools.

When I have some results, I'll let you know. I'm as curious as you are about what I'll find.

Keep up the fabulous work!

Cheers

P.S. While diving in La Bufadora (Baja) last weekend, I found 3 Ochre seastars! We seem to be the only ones without them. What a mystery!

(Mussels, continued from page 2)

California.

Predators of mussels include seastars, sea anemones, octopii, birds, and snails. By clumping together, mussels attempt to cut their losses when these animals get hungry. For example, it's difficult for the seastar to get hold of both valves if the mussels are tightly grouped.

Mussels, like other creatures must fight for survival. From beginning to end, it must fight for its very existence and reproduce voraciously to beat the odds and to continue its species. Happily the mussel is usually quite successful in this endeavor.

The mussel population in Cabrillo National Monument has been in a dramatic state of decline in the past two decades. Interestingly, the monitoring data (see graphs and photos on the following page) show that while populations have been declining in Zones II and III, the population in Zone I might be experiencing a recovery. There are a number of theories for why we have seen these patterns including increasing water temperature, pollution, and a differential input of larvae due to current patterns. This decline is of great concern to the park and they are hoping to determine a cause and a strategy to try to reverse the mussel population crash. (See Tidepool Tidbits in the adjacent column.)

Barnhart, Diana and Leon, Vicki; Tidepools, EZ Nature Books, 1999.

Brandon, Jeffrey L. and Rokop, Frank J.; Live Between the Tides, American Southwest, 1985.

Tway, Linda E.; Tidepools — Southern California, Capra Press, 1991.

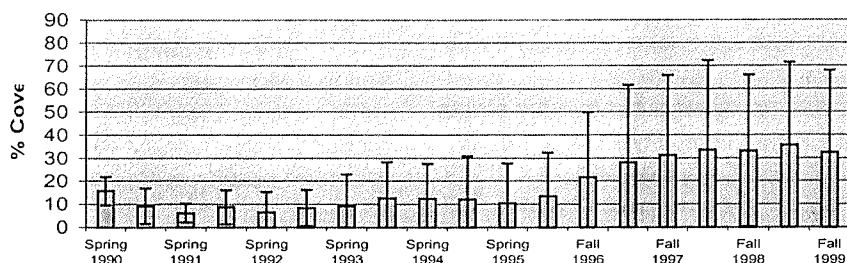
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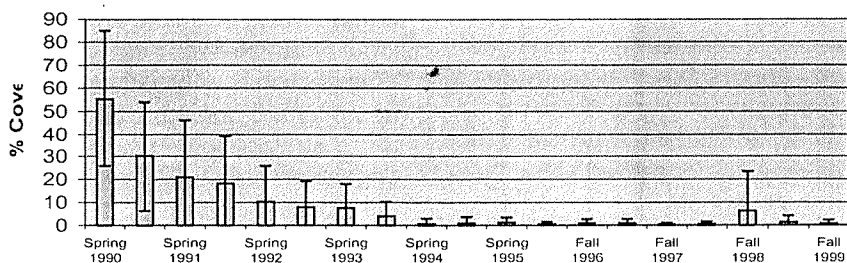
Both the tables and photographs show the decline in the mussel population in the tidepool areas. Note the photographs illustrating the changes in Zone III from 1990, (a relatively abundant population) to that same plot which is barren in 1999. Year by year data are shown in the graphs



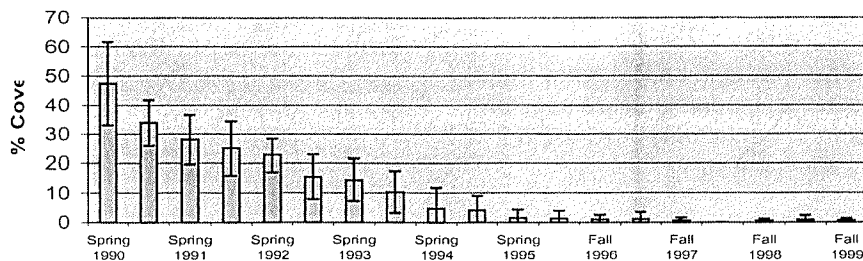
**Mussels in Mussel Plots
Zone I**



**Mussels in Mussel Plots
Zone II**



**Mussels in Mussel Plots
Zone III**



The graphs show average (per zone) cover of mussels in mussel photo plates. The lines represent 95% confidence intervals (for those of you familiar with statistics).

ANNOUNCE- MENTS

1. LIGHTHOUSE COSTUMES.

There is a need for someone out there with good sewing skills and for costume upkeep for the volunteers who work in the lighthouse. Right now the park needs a new period costume put together — it has been sized and is pretty much all ready to put together — but it needs someone who has very good skills and can sew well. Imagine, if you really like to sew, it is something you can do at home while collecting VIP hours and enjoying every minute. If interested, please call Emily Troxell at the Cabrillo National Park (619.557.5450, ext. 2242).

2. HELP! There is a real need for a person with some computer experience to help me produce the VIP Newsletter bimonthly using Adobe Page Maker software. It isn't difficult and the software is very user friendly, but I am having trouble finding the time to get everything done. The computers with the software are at the Park in the library. A format has been designed by George Herring for the articles

and puzzles that are in there already, and the text is on disk, so it would simply be a matter of fitting the new newsletter into the format. It shouldn't involve more than one or two hours per month. You would, of course, receive VIP hours while working and a great deal of gratitude. Please, the newsletter and I need you. Call Lynn Moss at (619) 222-6171 or e-mail me at chalupa@juno.com right away.

3. VITAL STATISTICS. Finally, there are two wonderful bits of news that all volunteers will rejoice in. First of all Mark and Tanya Long are delighted to welcome Brett Michael into their family. He was born on March 21st at 8:00AM, and he weighed 7 pounds and 14 ounces. Everyone is doing well. Congratulations to the Long family-three. When do we get a viewing at the Park? Secondly, Samantha Weber surprised us all and was married on March 27th in Marin County. Congratulations to you all. Many, many happy years ahead for Brett, Tanya, Mark, Sam, and her new husband Joe!

MUSINGS FROM MARY BETH

by Mary
Beth Vygrala

Summer is almost here and we need volunteers in the tidepools on weekends — one person each morning and one person each afternoon. Visitors still go down to the tidepools, even during high tides, and we are extremely busy in the summer. We need people there for interpretation and safety.

Don't forget that for those of you with other talents and interests, there are other jobs in the Park such as lighthouse costume interpretation, visitor center desk, work in the library and computer work. Training will be provided. Remember we need an Adobe Page Maker newsletter volunteer as well.

Mark Your Calendars!

There will be a Volunteer Recognition Dinner on Saturday, May 6th. The theme this year will be "A Night in the Orient." Invitations will be forthcoming.

Reminder: Please sign up for the few low tide days in April and May. There are still several vacancies on the April Tidepool Calendar.

Again, thanks for all you volunteers do. It wouldn't work without you.

BOOK REVIEW

by Lynn Moss

Perhaps it's the fact that as an undergraduate I was an English major, but I find it impossible not to share with you a wonderful book that I recently purchased in the Visitor Center. My only regret was that I didn't have the book, Tidepools--The Bright World of the Rocky Shoreline by Barnhard and Leon, before I began "tidepooling."

What first attracted me were the incredibly beautiful pictures of tidepool animals. There are 45 of the most glorious color photographs in the book that also

make critter identification much easier. As I thumbed through the book the first time, I found myself saying, "Oh, that's what different nudibranchs look like, or that's what a seastar who ejects its stomach to digest dinner looks like!" Here it is in living color. Truly the photographs are breathtaking and worthy of at least a trip to the Visitor Center to marvel at our microcosmic world of tidepools.

The text is extremely informative, interesting, and sometimes poetic. The writers have a delightful sense of humor (i.e. when they describe a picture of a lined chiton on encrusting algae, the title is "An ancient critter with amazing graze.") I learned why a crab or seastar can get rid of its own leg and live to grow more, but if someone pulls the leg off, the crab or seastar will probably die. There is much to learn here and it's interestingly and caringly done. Additionally, the writers do it with a sense of humor so it's fun to read.

Don't miss taking a look at this wonderful book with a picture of Ochre Seastars on the front cover. It costs \$7.95 and is a great addition to any tidepooler's library. I can't wait to share it with my grandchildren, for I know it will grab the older ones right away. It certainly grabbed me.

"Along the rocky shores of the coast we are given the opportunity of passing through the looking-glass into the tidepool world. In a single tidepool, we are privileged to see a rich and busy habitat in intimate detail."

(Barnhard and Leon, Tidepools, p.37)

**BETH
GRAMOY
and KEVIN
O'LEARY**
March-April
VIPs

by Lynn Moss

The team and their
passions

I've done it! I've done the impossible. With incredible guile and cunning, I managed to corral "the dynamic duo," the originals," and two of my favorite folks. Beth and Kevin have been VIPs from the day of the first announcement that there was a need for help in the Tidepools. It's clear from the outset that they are a team; they work together to find the wonderful creatures, confer and know most of the answers, and educate the public in the most delightful way. They are, indeed, special people.

Beth was born and raised in San Diego with a family that included two sisters. She went to San Diego State and majored in sociology, and she followed that with some graduate work.

Then she found employment in computer software engineering. Go figure! Actually, it all makes more sense than some might think.

Lots of us start out thinking we want one career and try another while we wait for the "right" thing to come along. Sometimes we just find it by accident. Beth works in the Software Engineering Process Office for SSC SC to find better, faster, and cheaper ways to produce their software products. She teaches classes on Software Project Management and Software Process Improvement. On her bio sheet she said that what she wanted to be when she grew up was "rich" (financially) and now she wants "to be more of what I am now, which is rich in every other way."

When asked if she had advice for other VIPs, she said, "Just have people reread Darrel Sims advice in last month's "VIP Voice." "And the more fun you as volunteers have out there in the tidepools, the more fun the visitors will have, and the more they will connect with the environment and the animals. It's all about protection through education — have a good time with that." About being a VIP for the last 4 years, Beth says, "I have done volunteer work before but this is the most demanding, the most rewarding, and the most fun. Most of our visitors have never seen the animals we have in the tidepools, especially in their natural habitats. I love to point them out and tell stories about them — the animals, not the visitors

(though there are some stories I could tell about the visitors, too!). To show someone a sea hare, and let them pet it, and then watch them leave talking about that 'huge, ugly black snail' means that sea hare



made another friend and protector. Between the slippery rocks, the questions people ask, and trying to be as good as my teammate, I'm always on my toes. Even on a cold, gray day when few visitors brave the weather, it is wonderful to just be there. I also look forward to Whale Watch Weekend and our puppet show as much as I looked forward to Christmas as a kid. Playing with the kids and telling the whale's story with puppets is a hoot. Between the tidepools and the puppet show, it's a great way to improve myself and to give back, and I am grateful



to the Park Service and the folks at Cabrillo for allowing me the privilege to be a volunteer."

Kevin was born in Tampa, Florida and moved to San Diego in the fourth grade where he has been ever since (he knows a good thing when he sees it!). His parents and 3 brothers are still here, too. He got his BA in oceanography with an emphasis in marine biology, and he went on to the Naval Postgraduate School in Monterey for a Master's in software engineering. He said, "I have a background and education in marine biology and oceanography. My current job is in software engineering, and while interesting and necessary, doesn't require much application of my avocation. Being a tidepool volunteer allows me to be involved in a field I have always liked. I enjoy educating the people who come to the tidepools about all the animals, about the tides, and even the geology in the area. It's a good way to keep learning, to keep involved, to stay healthy, and to maybe even make a difference. Now, if I can only figure out a way to convince Beth not to make me crawl around on my knees behind a stage for half an hour with my arms above my head and puppets on my hands..."

After college, Kevin had a position with the National Marine Fisheries Service riding tuna boats as a government observer for three years, clearly a job for a politician as well as a knowledgeable marine biologist. His job was to check the fishing techniques that the fishermen were using to take their tuna and to do scientific tests. Rather than simply being an observer and a threat, Kevin learned how to do all the jobs on the boat. At one point early on in this job, he was disappointed and uncomfortable having to enforce a government regulation on how to take dolphin-safe tuna, as the technique the government mandated did not seem to work. It was risky and ineffective, the dolphin mortality was as high as ever, and the boat captains were frustrated. To make sure he really understood, he tried it himself. He took out the small raft alone, went into the

fishing net, jumped into the water teaming with tuna, sharks, dolphins and fish of every kind that had been caught up in the net, and did, himself, what he was asking of the fishermen. From that day on no tuna boat on which he was an observer had another dolphin death resulting from the boat's purse seine operations. From then on he made sure the fishermen were trained in the technique and were trained in being in the water. Surprisingly, many did not even know how to swim and their fear kept them from being able to implement the government technique successfully. During his career with the Fisheries, he was selected to be the representative for the U.S. on the International Whaling Commission and worked his way around the Antarctic tagging Minke whales and logging bird and animal counts. At one point, they were invited aboard a Japanese whaling factory ship to observe the processing of the whales. Now, he too works at SSC SC in software engineering for the Satellite Communications Department.

He and Beth met at work over 18 years ago. Together they love to travel in the most adventurous situations. They've seen endangered Leatherback turtles laying their eggs on the beach at 3 A.M. and been lost in the jungle in Costa Rica, had a close call night diving on a Caribbean wreck, kayaked 17 miles around the northern Napali coast of Kauai in Hawaii (Beth had never kayaked before), went to the Olympics in Korea, Barcelona and Atlanta and they look forward to going back to Ireland to visit Kevin's relatives and going to Rumania to see if any of Beth's family is still around.

To sum up, I found a passage in the book I reviewed in this issue, Tidepools, that I felt fit the situation. "Who speaks for the tidepools, for the soft yielding shapes, for the tiny crabs in armor, who will defend this looking-glass world, brilliant, busy, undefeated by water, quick to shatter under the tread of uncarving feet." Beth and Kevin are some of the people that speak for them — beautifully. Kudos!

A TRIP TO THE CORONADO ISLANDS

by Lynn Moss

A day to remember

Approximately 15 miles south of the Point Loma Light is a group of four islands, Islas los Coronados (the Coronados), which lie about 7 miles west of the Mexican mainland. These islands are the visible portions of underwater mountain ranges that rise steeply from the sea. Cabrillo noted the presence of the Coronado islands during his voyage in 1542. He named them Las Islas Desertas (The Desert Islands) reflecting their scant vegetation (primarily grass, low shrubs and prickly pear cactus). In the 1600's, they were renamed the Coronados "in honor of four brothers of that name who were put to death for their Christian faith in the time of Diocletian." (Baja Boater's Guide, Second Edition, Williams, 1994)

The closest island to Point Loma is **Coronado del Norte**, the second largest of the Coronados which lies in a general NW—SE direction and reaches an elevation of 467 feet at its highest point. **Coronado del Sur**, the southernmost island is the largest of the group and the highest, reaching an elevation near its southern tip of 672 feet above mean lower low water. It is nearly two miles long and lies along a North—South axis. An item of historic interest on the island is the remains of the Coronado Yacht Club (CYC), a facility which was located near the shore in a small cove (Puerto Cueva) on the northeastern part of the island. The CYC was used as a casino in the early 1930's and its demise can be traced to two events, the ending of prohibition in the U.S. in 1933 and the abolition of gambling in Mexico in 1934. What is left of the casino building is used today by a detachment of Mexican Naval Infantry which is there to enforce a prohibition against landing on the island, a move by the Mexican government to help preserve the Island's threatened bird and animal life. Elephant seals are found in large

numbers on the west side of this island. Mexican fishermen cross from the mainland in pangas to tend lobster traps along this and other islands' desolate, wind-swept shores. There is some diving for sea urchins.

The remaining two islands, Roca Medio (101 feet, the smallest of the four) and Coronado del Medio (maximum elevation 251 feet) lie a short distance west of the tip of Coronado del Sur and are uninhabited. There are dive sites near these islands as well as around Coronado del Sur.

The week of March 13, there was a convention in San Diego of National Park Rangers, Interpreters, and others. That Wednesday, March 15, they had a day of field trips to Sea World, Behind the Scenes at the SD Zoo, an 8 hour trip to the Coronado Islands and other things. I was fortunate enough to join six other VIPs.

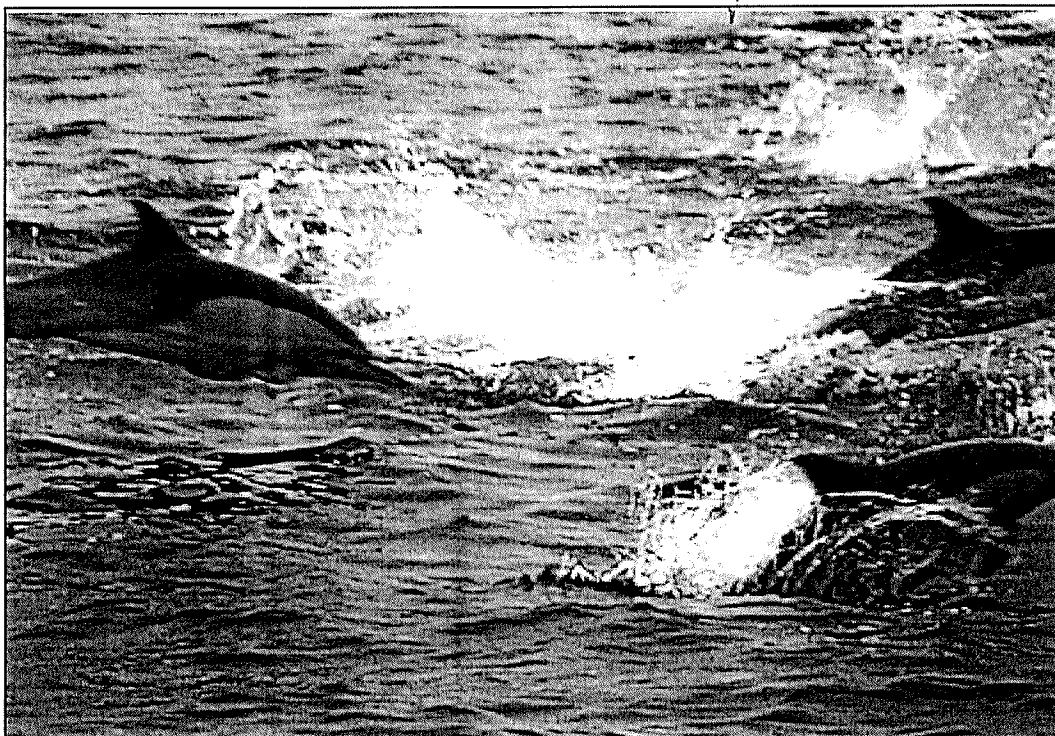
We left the dock at 8:20AM on the Pacific Queen, a sportfishing vessel. She is 88 feet long and 22 feet wide and cruises at 11 - 12 knots. A wonderful naturalist and large boat captain who teaches at Palomar College, Margie Stinson, piloted the boat and spoke to us about all the wonderful things we were seeing. Several of us talked about how wonderful it would be to have her come talk to us sometime since she is so knowledgeable and fun, but she is very busy and lives in north county. Mary Beth is working on it, however.

As we left the harbor on this hazy and cool day, we saw lots of sea lions and jelly fish, and we circled the fish docks to see the birds which included gulls, pelicans, terns and cormorants. Then we headed west toward the Coronado Islands. Our first whale sightings were California Grays who were swimming leisurely and looking for breakfast. Each time there was something to see, the boat was slowed or completely stopped so as not to frighten the sea life. At about 10:45, we came across relatively large pods of blue whales and fin back whales as well as more grays swimming slowly looking for food. Margie said that

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when a whale spotted food, they would signal other whales to come together to eat. We spent much time there in complete wonder. The blues and fin backs were there very early in the season, so we were incredibly lucky to have had the chance to watch them swim and breach and play. Apparently, the circulation system of the blue is so large that you could drive an old VW "bug" through its aorta and swim through its bloodstream. At about 11:40 we headed toward the Coronados once again and at noon spotted a tremendous pod of common dolphin (200+) that was breathtaking. The water came alive and they put on a tremendous display, then swam under the bow of our boat and along-side us. Clearly, nature was on our side that day despite the gray, cool weather.

At 12:30PM we arrived at Coronado del Norte and circled slowly. We saw elephant seals (the largest seals on earth and in many ways endangered since their whiskers are harvested as aphrodisiacs and to clean pipes), sea lions, seals, lots of sea lettuce, red algae, sea urchins by the score, Oyster catchers (birds), and sea stars of every hue. We circled three islands in all, but the clear hit of the day were the numerous and playful whales and dolphins. We felt blessed. The islands are a bird sanctuary, and the birders among us were counting and photographing like mad. Everyone came home tired, happy and hungry even though there was a great chef on board. What a day!



Tidepool Puzzle by Ramona Lester

VIP Puzzlemaster

S	G	Y	J	L	A	N	R	E	T	N	I	S	E	G	N	A	R	O	C
R	N	K	R	N	I	S	H	O	P	W	R	Q	X	P	N	S	G	G	E
A	I	N	R	O	F	I	L	A	C	O	P	O	C	L	U	S	T	E	R
L	K	E	O	B	T	G	Y	L	S	R	L	T	R	B	N	R	O	H	O
U	C	T	A	F	Y	A	B	T	E	B	I	C	E	N	Y	D	X	I	L
C	O	N	R	T	E	S	L	W	L	H	T	A	T	C	S	K	Y	N	I
S	L	O	A	C	M	D	S	U	Q	N	S	R	O	K	E	H	G	G	S
U	R	T	D	I	A	B	E	A	C	H	L	T	R	O	V	E	E	E	Y
M	E	K	U	L	N	A	S	T	L	R	W	N	Y	G	L	A	N	D	R
O	T	N	L	I	T	N	T	T	R	T	I	O	P	T	A	D	R	S	A
L	N	A	A	A	E	K	E	A	O	P	H	C	O	N	V	E	X	N	T
L	I	L	C	S	L	M	R	C	H	O	X	R	R	M	I	K	M	G	N
U	O	P	K	P	R	O	C	H	C	N	F	R	E	F	B	R	S	I	E
S	X	C	O	P	E	N	E	J	N	E	S	Q	S	A	T	P	O	L	D
K	O	H	O	R	S	E	S	S	A	M	E	S	N	E	D	I	B	L	E
R	S	N	O	H	P	I	S	G	N	I	L	I	P	R	E	I	P	S	S

Unscramble the following: SUSLMSE _____

(Last newsletter's scrambled words were Sea Stars)

Find each of the following in the grid above. Words may be found in any direction or on any diagonal

Anchor	California	Edible	Horse	Oxygen
Attach	Cilia	Eggs	Interlocking	Pier-pilings
Bay	Circulatory	Excretory Pores	Internal	Plankton
Beach	Cluster	Foot	Mantle	Radula
Bivalves	Contract	Gills	Mollusk	Rocks
Blue	Convex	Gland	Muscular	Secrets
Brain	Dense-Masses	Head	Open	Sedentary
Byssal-Thread	Eat	Hinged	Orange	Shells
				Siphon

