



Torreyana

*A bimonthly newsletter for
Torrey Pines State Reserve*

Issue 246

July 1997

President's Message — Docent Demographics — John Carson

When I joined TPDS in 1992, a surprising number of long-time members belonged, and I was impressed by their continuing commitment to TPSR and the Society. But in the last several years it seemed to me that I was seeing fewer familiar faces, and a review of the membership in the table below shows why.

<u>Years an Active Docent</u>	<u>No. of Docents</u>
15 - 22	1
10 - 14	9
6 - 9	24
3 - 5	23
0 - 2	22

Over half the members (57%) joined in the past 5 years, and 87% joined within the past 9 years. Many of the early members are no longer active, and there has been a large increase in new members. The Society has been experiencing a major shift from the period before 1990, when there were about 50 active members and everyone knew each other, to a much larger organization now, with many new and recent members.

New members bring vitality, enthusiasm, and fresh ideas, which help ensure the strength and continued success of the Society. But at the same time we don't want to lose the strength of personal friendships of the earlier period. So I urge all the members to make a special effort to expand their

circle of docent friends so that the Society doesn't become just another large and impersonal organization.

And last, as the number of early members drops, I hope that some of the new members will make the effort to learn about the history and previous accomplishments of the Society so that the "corporate memory" isn't lost. Our last link with the early days is our historian, Judy Schulman, who is in her twentieth year with TPDS. Perhaps some of the new members can join her in her ongoing historical research on the Reserve and the Society.

Next Docent Society Meeting **July 19th at 9:00 A.M.**

Although our docent training includes information on Native American uses of local plants for food and medicine, could you survive for days in an isolated part of San Diego County just by living off the land? Our guest speaker, Bill Gephart, will tell you how. His talk will cover historical and contemporary survival skills and techniques and will include suggestions for surviving in wilderness areas and during natural disasters. Bill brings an unusual combination of backgrounds to this subject: three years active duty in the U.S. Army Special Forces and seven in the Reserve, during which he taught survival skills; and membership in the Canyoneers, the outdoors interpretive group for the Natural History Museum.

Docent Bio — Judy Schulman

— Del Roberts



Judy in her Torrey Pine hat

Judy Schulman has been a docent since 1977, when she joined TPSR after graduating from UCSD magna cum laude and Phi Beta Kappa with a degree in psychology. As our longest active docent, she has worn many hats with style and verve: the youngest President, the Torreyana Editor, a member of the Publications Committee, a Native American expert, and assistant in editing and publishing Hank Nicol's *Torrey Pines: Beyond the Trees*. She is currently on both the Publications and Historical Committees.

She grew into her role as our Historian. Typical of Judy's thoroughness and her pack rat nature, when she was asked to fill an empty cabinet at the Lodge with some TP historical material, she started at the library, expecting to spend an hour writing the definitive history of TPSR, but then went on to the SD Historical Society — and is still collecting. She visits postcard shows and has acquired over 100 TP's postcards showing the changes over the years. She's also become the leading expert on Camp Callan, a former US Army training center during WWII adjacent to Torrey Pines. Even the Pentagon refers requests for information to the Judy P. Schulman collection. The San Diego Historical Society now has a complete copy of all her files.

But all work and no play makes a very dull person, which is not Judy. Each holiday, she wears a special outfit to delight the museum visitors: Santa at Christmas, a Easter Bunny, and Smokey the Bear for Halloween. As a confirmed classic trekkie, with a collection that dates back to 1966, she and a fellow docent once gave a Star Trek walk in Torrey Pines to a group of Boy Scouts. She hid behind the group and provided the information with her computer voice. "I'm just a kid at heart," she says.

Don't let her fool you, as she is prone to do with great humor. Judy is a very successful adult. She has been a computer programmer for Copley International Corp, a marketing research analyst, and a senior data processing editor for a real estate firm. But her greatest joy is Torrey Pines basket weaving, and she's taking a prolonged "fantasy vacation" in order to pursue it full time. "Basketry is a life-style to me," she says, "a hobby that has become my vocation." Her baskets have received awards at the Del Mar Fair, and she also participates in craft fairs. This summer Judy will demonstrate her weaving at the Heritage House in Old Town, and she has an offer to teach basket weaving at the Mission Trails store.

"Almost everything good that's ever happened to me in my life has come from Torrey Pines," says Judy. And she has certainly been good to us.



Dedication Planned for Dr. Thomas Whitaker



A bench dedication ceremony is planned for the late Dr. Thomas Whitaker, an indefatigable supporter of the Torrey Pines Association (TPA), and its president from 1963 to 1985. The ceremony will take place in the Whitaker Garden, established by him in memory of his wife Mary, on Sunday, July 27th at 1:30 p.m., followed by a buffet at the Lodge. Please RSVP by July 23rd to Beverley Whitaker Rodgers (818) 246-3448 or Jean Kramer (619) 453-0379.

Dr. Whitaker, along with the late Peggy Fleming, spearheaded the campaign for Torrey Pines Extension in the 1960s which brought in \$700,000 in donations for the acquisition of 168 acres. He worked as a geneticist for the U.S. Department of Agriculture at a field station on Torrey Pines Mesa, and was in *Who's Who in America* and *in California*. In San Diego he was president of the San Diego Society of Natural History, served on the Research Council of the San Diego Zoo, and was a research associate at the Scripps Institution of Oceanography, all in addition to his activity on behalf of Torrey Pines.

Nature Note — Magnetite — Don Grine

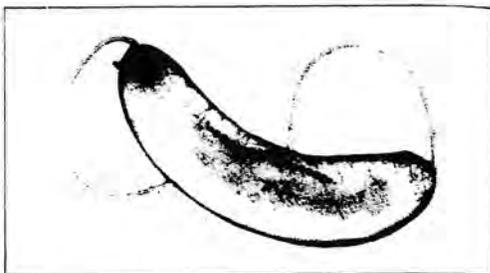
In the children's program, we have been using hand magnets to pull out black grains of "magnetite" from sand along the paths in the Reserve. The material is probably mostly magnetite (Fe_3O_4) but many grains probably have mixes of other minerals, especially ilmenite (FeTiO_3). The grains are not iron. Native iron is rarer than gold because iron combines rapidly with oxygen to form stable compounds.

Magnetite is a common minor mineral in most igneous rocks. It has a hardness of 6 on Moh's scale, is resistant to chemical change, and does not break easily. It is therefore a common mineral in most sands and sandstones derived from the igneous rocks.

In the Reserve, the amount of magnetite in sand varies depending on the origin of the sand. For instance, in sand from the Torrey sandstone on the Fleming trail, there is almost none. In sand on the ocean side of the Fleming trail, there is a few percent.

Magnetite also separates when water runs over the sand because it is about twice as dense as the quartz making up most of our sands. The black streaks on the beach are made as water from a receding wave washes away the quartz in its ripples. Toss a cobble in a few inches of water and watch the black streaks form as the wave retreats.

Microscopic magnetite crystals have been found in the brains of homing pigeons, sea turtles, and several other animals. Experiments show that these animals can sense the direction of the earth's field and use it to navigate. We don't yet understand how the sensing works but presume the magnetite acts as a compass needle.



Magnetotact bacteria (see above) use their chain of magnetite to swim down the inclined magnetic field toward the bottom of any body of water. They grow better in low oxygen concentrations

Docent Doings



August Meeting Replaces Beach Party

Because of the low turnout at beach parties in the past few years, the Docents voted in June to have an August meeting instead. A special program is planned. Look for details in the August Torrey Lite.

Docent-of-the-Month Awards: The two most recent recipients of the Docent-of-the-Month Awards prove that whatever your interests, TPSR needs your contribution. Congratulations to both.

May recipient Karen Griebe was honored for her incredible work in keeping the bookstore filled with enticing reading, while balancing its finances. She began by helping our beloved **Rowdy James**, and took over when he retired. Five years ago as a new Docent she didn't know one bird from another. Now, she and her husband, Richard, the true birder, just returned from a Wyoming Audubon Camp in the wetlands where the mosquitoes outnumbered the birds. "I'd rather go antiquing," she says, "Folks don't have to be experts on birds or flowers to add something to the Docent Society."

Jeannie Smith, our much deserved June recipient, has always had a fascination with nature. At Scripps Institute of Oceanography, she joined a deep sea drilling project whose purpose was to discover the evolution of continents and plate tectonics. When grants diminished, she returned to school and received a degree in computer science and became a software engineer. But after years of science nature called, and she left computers to look for a more humane environment. A year ago she found Torrey Pines. Although nature is still her priority, she has spent hours formulating our computer programs: completing a data base for the TPA and TPSR; designing the TPSR Web page; and entering the bookstore price list for easy updating. Jeannie also heads and teaches an ESL program in Solana Beach through the Lauwbach Literacy group.

Training Session Ends: Jim Cassell reports that out of a class of 35 Docent trainees, 16 have passed their tests, and five of them have fulfilled all their requirements.

Budget for the next calendar year is posted on the bulletin board in the Docent room. Please call **John Carson** if there are any questions.

HABITAT LOSS OF UNIQUE SPECIES

Dr. Ted Case, professor of biology at UCSD, gave a dramatic slide presentation at our May meeting showing the loss of habitat of endemic plants and animals in North America. Although California has 25% of endemic plant species in North America, this state also has the highest number of extinctions. According to Case, the Southern Maritime Chaparral alone has dwindled down to 15% of what it was in 1920. It is found only in fragmented areas, mainly in Camp Pendleton, Mira Mar Naval Air Station, and Torrey Pines State Reserve.

"Torrey Pines is a virtual island, surrounded by hostile forces," says Case. How do we know what happens under such fragmentation? Case has been working on some answers. His current interest is in keeping track of the reptile and amphibian population. For the past three years he has been principal investigator for a research project to capture, identify, mark, and release each species on 26 sites in Southern California. The sites in TPSR are: North Fork and South Fork Trails area; Parry Grove; Guy Fleming Trail; Lagoon; and Extension.



TPA Support for the Carmel Mountain Conservancy Plan

The Torrey Pines Association (TPA) has been our most active organization, keeping watch over the TPSR and the surrounding area. In their recent May meeting, the members unanimously moved to support the Carmel Mountain Conservancy Plan for substantial conservation of the area just east of TPSR known locally as "Carmel Mesa." The following excerpts are from a letter by the newly elected president, Sally Spiess, to Mayor Susan Golding and City Council Members:

The Counselors have in the past expressed their concerns that construction on any part of Carmel Mountain/8A would have an adverse impact on the integrity of the Reserve and Los Peñasquitos Lagoon. The Counselors are most notably concerned about development of the western ridges and southwestern slopes. The adverse visual impact of such potential development would be manifest, not just from the much-used Torrey Circle (where Naturelands held its kick-off event last fall) and main road through the Park, but from the entire eastward looking viewshed of the Park. One only needs hold an image of the recently completed "Torrey Reserve" Business Park, just east of the I-5 in one's mind to understand the seriousness of this visual impact.

Other impacts, direct, indirect and cumulative include: increased pressure on the one extant wildlife corridor currently supporting the Reserve; increased pressure on the watershed as more of the surrounding land would become impermeable and introduce increased levels of unfiltered pollution into the watershed; and worsen sedimentation and siltation of the Lagoon, which already suffers from persistent closures at its mouth, which are time consuming and costly to remediate. For these same reasons, the Counselors also support the modified northern alignment of State Route 56.

Moreover, any development on even a small portion of the Mesa, due to its size and topography, would create further degradation through environmental pollution emanating from night lighting, predation from domestic animals, encroachment of buffer zones into current habitat areas, acceleration of edge effects on plants and animals, introduction of non-native plant species to outcompete local varieties, and changed in drainage which may lead to adverse impacts to onsite vernal pools.

Black plastic drift fences are used to guide critters into five gallon white buckets buried in the sand. Several species of snakes have been identified: the king; gopher; Western rattlesnake; lyre; and the most common in the Reserve, the striped racer, which can be seen in our new taxidermic display in the Lodge. Only one third of the traps are open at a time and they are checked daily by graduate students. The buckets contain food, wet sponges for moisture, tubes, and cotton insulation. Snakes seemed to enjoy the cool buckets and sometimes camp out in the tubes. Among the other species identified were the lizards: side blotched; Western fence; and orange throated whiptail.

The disruption of normal habitat allows hostile forces such as exotic plants, predators and urban development to upset the delicate balance of nature. Federal and State governments are now concentrating on protecting endemic habitats by setting aside the remaining land available in hopes of keeping endangered species from becoming extinct. Ted Case sounded an alert that the smaller the fragmented areas of endemic plants and animals, the more vulnerable they are to extinction. And as we all know, extinction is forever.



For further information call the Carmel Mountain Conservancy at 682-7026.

"State of Lagoon Tour"

— Theo Tanalski

I attended the June 4 "State of Lagoon Tour" as a leader of Lagoon walks during the last three years and as a member of the TPDS/TPA committee to develop a wetlands interpretive center. My preconceptions have been challenged. The Lagoon situation is much more complicated and delicate (due to the fragility of nature), and more extreme and bizarre (due to human actions), than I had imagined. As a result, finger pointing no longer serves a function, opportunities for interpretation have multiplied, and I'd like to share these facts:

Nature needs an undamaged habitat! Salt marsh daisy (*Lasthenia glabrata* ssp. *coulteri*) is found only at the EDGES of salt pans. As water and sediment flow in, many pans (e.g. near Sorrento Valley Road) have disappeared in less than 5 years. Cordgrass (*Spartina foliosa*) cannot grow here because our salt marsh channel edges are too steep; we now have solid pickleweed (*Salicornia*). As a result, light-footed clapper rails cannot live here. Transitions between salt marsh and uplands are essential for healthy marsh ecosystems. Animals migrate upland during high tides for refuge. Small bees living on uplands are required to pollinate endangered wetland plants. Wetland bird's beak needs open spaces in wetlands provided by diggings of burrowing mammals from the uplands. Transition habitat is available only south of the railroad track.

The main problem is excessive water from 95 miles of watershed: houses and concrete drainage channels do not allow rain water to soak in; irrigation runoff, sewage breaks, and sediment from uncontrolled development add to the noxious stew. We are stuck with excessive runoff from prior development. Future developments could implement stricter runoff requirements, so as to decrease the increase of the disaster. Peñasquitos creek became a year-round stream in 1980, with peak flow much higher. Some remember the great Lagoon flood of the early 1980s, but only businesses in the industrial park on Roselle street remember the great flood of January 1997 (a "low rainfall" year). Erosion sediment drops out of the stream at lower flow rates, creating picturesque sand islands. These islands grow giant reed (*Arundo donax*) forests, then become flood and

fire hazards for the industrial park tenants. Our stream's "picturesque" high banks, and "rugged" rock and cobble bottoms result from a process called "down cutting": soil and plants cannot keep up with the year-round water flows.

Long Term Solutions? Experts say the solution is adopting a "watershed perspective" treating the 95 miles of drainage as an integrated system that functions "as it should". The origin of this mess is called "cumulative impact:" smaller insults adding up to the present situation. Can "cumulative improvements" of future and present developments reverse the trend? Of course, sand could periodically be dredged out and deposited on our beaches. The lagoon would become more normal after a while until the sediment returned. And after 15 years of experimenting, we have developed a means to keep the Lagoon mouth open year-round. However, there is no periodic coliform bacteria testing in the "kiddie pool" area at the Lagoon mouth because of lack of funds. Docents, you now have more opportunities for interpretive education...



Joy Zedler, renowned plant ecologist, and head of the Pacific Estuarine Research Laboratory at San Diego State, spoke at the Lagoon Tour in a field of Hottentot Figs, which invades the Lagoon and whose flowers do not support native insects. The chart of the habitat types in the Upland and Wetlands area shows a loss of 85% of salt marsh in the region.

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Editor's Corner— The next deadline for submissions is August 20th.

Report from the Ranger — Supervising Ranger Bob Wohl



Ah, summer! Here come the crowds of beach-goers. Del Mar Fair is in town. Racing season. Crime goes up in Del Mar. Thank goodness we have our seasonal park assistants to help us out during this frantic season. And boy, am I glad to have three high caliber, high quality, well educated, seasoned and veterans-of-Torrey Pines Rangers to coordinate this complex and sophisticated operation; as well as assist our swelling ranks of docents and volunteers....Ah, er, huh? Where's Chris? Where's Allyn? Greg, how are you doing? Are you feeling OK? ("Happy 50th Birthday, "old-timer.") Allyn, who is due in October, should be here most of the summer, but she has been on Light Duty (no enforcement or public safety function) since May 1st. Chris went on Light Duty May 6th, and may be out most of the summer after his knee surgery June 3rd. We send our best wishes to him for a complete and speedy recovery. So you will be seeing more of Greg and me on weekends.

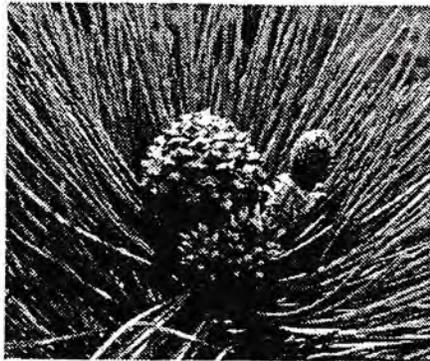
The staff has had a few changes this season. Fortunately we have Stacey De Jane returning to lead the park aide operation. Back too is Mick Calarco, with some experience in state park archeology; Rick Thompson, who has been attending the three-state trail maintenance and management workshops with Chris; Holly O'Meara, who came to us as a college intern and stayed for a diversity of park aide functions; and Gretchen Morse, who graduated in Wildlife Resource Management and had come over to Torrey Pines from San Elijo. Our new park aides, Stephanie Widmann-McKnight and Carl Parker have both come out of UCSD's Biology Department. Stephanie worked on herpetology research for Dr. Ted Case and Mike Wells.

Which reminds me, Resource Ecologist Mike Wells is due back July 1st and his nine-month replacement, Dr. Jamie King, Acting Resource Ecologist, will be leaving us, but will be working with Stacey Hathaway for a few months to finalize the wildlife corridor report. That "other" Jamie Lynn King, has been hired as an Environmental Services Intern, in charge of Lagoon resource management, volunteer coordination, and exotic plant removal. Yes, we do have another ESI on payroll—the inimitable Charles Kerns, "resident" scientific researcher, vegetation rehabilitator, and creator of our nursery.

So, with over 100 talented, conscientious, knowledgeable and dedicated docents, I know we will succeed once more in having a great, wonderful summer!

Torrey Pines Docent Society
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Del Mar, CA 92014

TORREY PINES



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DOCENT SOCIETY

Elaina Zone
Helping Hand
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JULY DUTY CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 L Weir L Davis	2 L Margulies L Wenman	3 L Clark L Wenman	4 L E. Sacks W D. Miller L W Grine	5 L Weir W Ferguson L W D. Roberts
6 L Grain W Cassell L Brickelmaier W Kamen	7 L R. Miller L Cooper	8 L Talberts L Dixon	9 L Amanns L	10 L Rudolph L Hauser	11 L Campbell L Gittelsohn	12 L Phillips W Marley L Weir W Stiegler
13 L Heller W Ferguson L Anasis W Tanalski L Clark (3 to 6)	14 L R. Miller L Cooper	15 L Katz L Dixon	16 L Campbell L Nimick	17 L D. Miller L Shaw	18 L Wollaeger L	19 MEETING L Grain W Brav L W D. Miller
20 L Schulman W Choffee L Stiegler W Kamen	21 L Rudolph L Huber	22 L Talberts L Davis	23 L Stein L Wollaeger	24 L Smith L Hauser	25 L L Gittelsohn	26 L Robertson W Marley L W Brav L Briggs (3 to 6)
27 L Heller W Ferguson L Phillips W D. Roberts	28 L Katz L Huber	29 L Margulies L Shaw	30 L L	31 L Smith L	DUTY COORDINATOR: ELAINE SACKS 551-0708 Hours: Lodge Daily 10 - 1 and 1 - 4 Walks: Sat/Sun/Holidays 11 and 1	