



TORREYANA

Published for Members of the
Torrey Pines Docent Society
and the Torrey Pines Association

No. 188

June 1991

Next Docent Society Meeting

SATURDAY, JUNE 15, 9:00 A.M. AT THE VISITOR CENTER

Come to some exciting times in the lives of both ancient and modern Kumeyaay Indians, who were in this area for almost 2,000 years. Martha Chapin, who lived with the Paipai Indians and was adopted by them, will describe Indian ceremonies and show artefacts. She will also have samples of Indian food. Martha has studied the Kumeyaay Indians over a long period of time and is presently writing a book on them. She is well-known locally as a lecturer at UCSD, other schools, and museums. She formerly had an appointment as a writer-in-residence at UCSD and also worked on the Indian material in a script for John Wayne. Martha says she "will take us into a pristine world and into another awareness among a people who know they are related to all of nature. They are the consummate ecologists." . . . Her presentation will follow the regular business meeting and refreshments.



SECOND "DOCENT APPRECIATION" PARTY JUNE 3

If you haven't made your reservation for the second annual "Docent Appreciation" party Monday, June 3, hosted by the Torrey Pines Ranger staff, run to the phone and do it NOW! Call either 755-2063 or 452-8732 to tell them you're coming and if you are bringing a spouse or a guest. The party begins between 6:30 and 7:00 P.M. and will feature such delectable Greek dishes as spanakopita, gyros, pita bread, rice pilaf, and, of course everybody's favorite dessert, baklava. Ranger Chris Platis, the source of the authentic Greek cuisine, has also arranged for music with a Greek dance demonstration.



The party will be at the Lodge. Last year's first-ever party given by the staff for the volunteers provided a more-than-satisfying feast and lots of camaraderie. This year's party promises to equal or top that.

Docent Doings

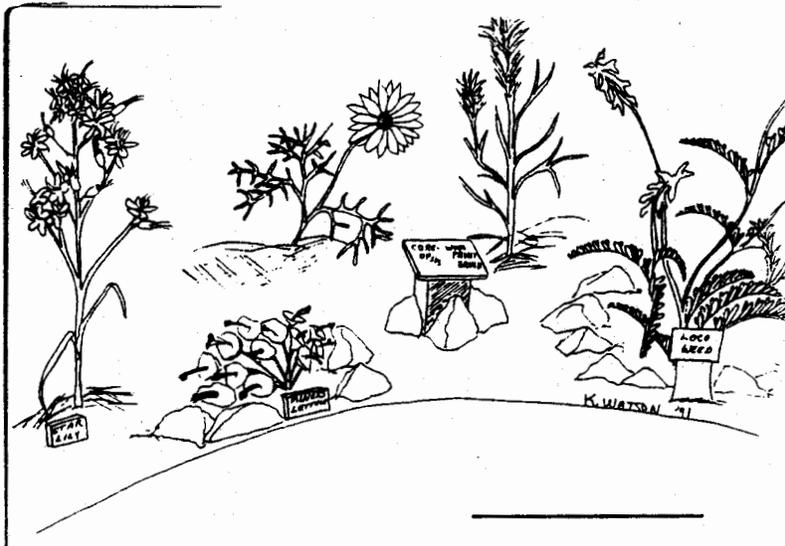
EXTENSION WALK JUNE 8

A guided nature walk will be held in Torrey Pines Extension at 9:00 A.M. Saturday, June 8, according to Jan Taylor. Jan said publicity had been sent to various newspapers and asked that anyone seeing the notices send her copies.

LETTER TO MAYOR AND CITY COUNCIL

Support for the San Diego Natural History Museum in Balboa Park was expressed in a letter sent recently to Mayor Maureen O'Connor and the members of San Diego City Council by Docent Secretary Bob Talbert, on behalf of the Society. The letter urged continued funding from taxes and tourists. It follows the Society's expression of support for the Museum in the form of a donation.

SPECIMEN BLOOMS BRIGHTEN LODGE ENTRANCE



Specimens of favorite native plant species in the Reserve now border the walk into the Lodge, providing visitors with more information about the variety of our native plant life. The improvement is thanks to Bob Amann, the tireless and devoted docent who has done all the work, including tidying up the dead and overgrown plants in the garden. Now that there is no longer a naturalist on the TPRS staff, we are lucky to have such docents to fill the gap.

SANTA ROSA ISLAND TRIP: TO BE OR NOT TO BE?

A trip for docents and friends to Santa Rosa Island to view the "other" Torrey pine is tentatively planned for September 7, 8, or 28. Forty-two persons are needed to charter a boat to the island, at a cost of \$47 per person. The trip there and back takes 11 hours, requiring a 7:00 A.M. departure. This means that an overnight stay would be necessary for participants in or near Ventura, where the boats are harbored. Landing from the chartered boats, incidentally, is relatively free from hazard, since it is by skiff to a ladder or directly on the beach, depending on the weather. Docents who have not yet signed up should let Del Roberts know if they would like to go on this trip.

NOTHING TO DO ON WEEKDAYS IN THE LODGE? HERE'S AN IDEA. . .

The cleanup day scheduled for May 6 was noteworthy for its lack of participants. President Diana Snodgrass is considering other alternatives for a thorough cleaning of the Lodge, but meanwhile docents are welcome to avail themselves of the new vacuum cleaner available in the Rangers' office. Spots that need repeated attention are corners where mice visit. Materials for dusting and glass cleaning are also available; these are in the cupboard off the docents' room.

Report from the Ranger

NEW ENTRANCE FACILITIES

The new entrance station to Torrey Pines State Reserve opened the weekend of May 16 amid a flurry of protests from nearby residents who object to its size in general and its height in particular. The residents, who voiced their objections to the staff, feel that the buildings, including the restroom, obstruct views and are unattractive. (They were unaware that the restroom building had been positioned by the road for the convenience of disabled persons, who can park nearby.)

The old kiosk formerly at the entrance has been moved to the North Beach entrance. For park aides who collect fees it is an improvement over the umbrella and table used heretofore.

All work at the park entrance is expected to be finished by June, except for the planters, which will sit unplanted until November or later, depending on when the fall rains come. At the most propitious time, native seed collected from such plants as ceanothus, bush sunflower, and bushrue, and now in storage, will be put into the prepared ground. Until that time, docents will have to explain that these bare areas are yet another unfortunate spinoff from our many years of drought.

DOG OWNERS TO BE TICKETED FOR VIOLATIONS

If you or your neighbors have been walking your dog across the area that is Reserve property by the North Beach parking lot, and including the beach to 6th Street in Del Mar, be aware that this invasion of wildlife habitat will no longer be tolerated. The Reserve staff members are prepared to ticket dog owners for trespassing, and this could cost from \$100 to \$235, depending on how many laws are broken, including unleashed animals.

News and Notes

LOCAL LANDSCAPES IN ART EXHIBIT

Docents may find the exhibit at the San Diego Museum of Art from June 1 to August 18 particularly interesting. It features four early San Diego landscape painters known as "plein air artists": Maurice Brown, Charles Fries, Alfred Mitchell, and Charles Reiffel. You may have seen some of Mitchell's paintings which include the Torrey pines area.

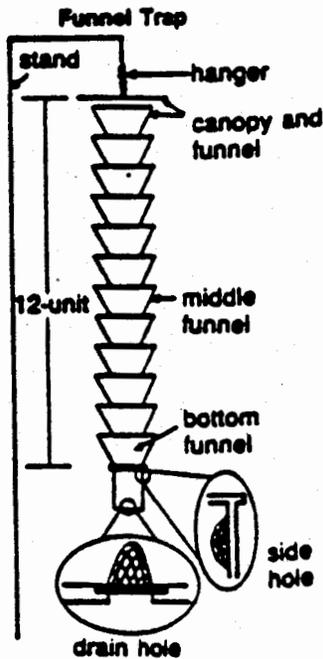
LEARN ABOUT GRASSES ON JUNE WALK

The California Native Plant Society is holding its "Grass Walk '91" on Saturday, June 22, at Rancho Cuyamaca. The key to common grass taxonomy will be on sale that day for about \$1.00. For details about the walk, call Ann at 619-284-3899 before June 14.

LIBRARY PAMPHLET FILE

Librarian Marc Gittelsohn has added a pamphlet file to the Docent Society library. Currently it is being kept in the righthand drawer of the desk in the docent room. Materials on local nature or history relevant to the Reserve will be kept in labeled folders. Feel free to contribute, and please note the source and date of your material.

WHAT'S THAT HANGING IN THE TREES?



Those long, black swaying contraptions that look like some kind of Halloween decorations among the groves of pine skeletons are, of course, bark beetle traps. The Forest Service of the U.S. Department of Agriculture and the California State Department of Parks and Recreation have combined forces to try to outwit the nasty little *Ips paraconfusus* (4-5 mm. long) which has destroyed perhaps 500 trees here over the past few years.

The traps are emitting pheromones, which attract both male and female beetles, who enter the traps and are killed by an insecticide. As a control, anti-attractants have been attached to other trees (usually indicated by a red tie). This is intended to cut down on the number of beetles lured to the Reserve by the pheromones and to keep them away from healthy trees. The project will be continued until control is established, with beetles being collected and studied weekly. The goal is to reduce the mortality rate of the trees by reducing the number of beetles.

Thirty traps were installed in ten locations among dead and dying trees the week of May 6. A dense concentration of beetles was found living among these trees. Participating in this cooperative effort from the U.S.D.A. Forest Service were Dr. Patrick Shea, Principal Research Entomologist for the Pacific Southwest Research Station; Dr. F. Thomas Ledig of the Institute of Forest Genetics; and Dr. M. Thompson Conkle, Geneticist. Bill Tippetts, Southern Region Senior Resource Ecologist of the California Parks Department, is in charge of the project.

If you need help in explaining the project, refer visitors to the well-done information board and sample trap displayed on the Lodge porch.

A LOVELY LAGOON AND ITS INHABITANTS

About 25 docents were treated to a lavish springtime display of both flowers and birds on a field trip to San Elijo Lagoon Saturday, May 25. County Rangers Robert Patton and Susan Walker led the group along trails bordered by rosy bush mallow, blue phacelia, purple fiesta flower, and lavender wild radish mingling among the willows and elderberry. Sunny nasturtiums spilled over the hills and festooned the bushes. Closer to the lagoon, the less flashy pickleweed, beach heliotrope, bullrushes, spiny rushes, and brass buttons--among others-- covered the ground.

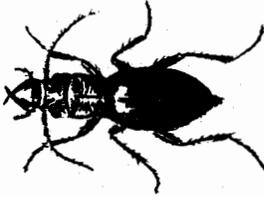
More than 20 species of birds were sighted, including the endangered least tern and the uncommon white-faced ibis. The majestic blue heron, the small green heron, great and snowy egrets, yellow legs and black-necked stilts waded through the shallows, along with avocets sporting reddish mating plumage on their heads. A family of mallards with eight fuzzy ducklings drifted along near the shores, along which killdeer cried and double-crested cormorants roosted. Overhead the busy terns--Caspian, Forster's, and least--circled, hovered, and dived. Swifts darted above the land, a black-headed grosbeak sang from a high tree top, and red-winged blackbirds flew out from the rushes. A bushtit and a marsh wren nest were both observed.

Just before the walk ended, a wedge of six white pelicans flew over the lagoon, offering a salute from nature as the ending to a most satisfying walk.



STIGMAS AND POLLEN, AND VARIOUS GO-BETWEENS by Elizabeth Nicoloff

(This is the second part of a two-part article. The first part appeared in the *May Torreyana*.)



California Black Tiger Beetle.

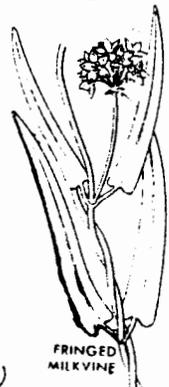
Beetles may have been the earliest insect pollinators. When they chewed on early flowers, munching petals, stamens, and pistils indiscriminately--and incidentally getting dusted with pollen--a mutually beneficial relationship was established: food for the beetle, pollen transfer for the plant. But the beetles were destructive, and the flowers gradually modified their structure to conceal the ovary from the beetle's chewing mandibles. As coevolution of flowers and pollinators proceeded, both parties became more specific in their attraction to each other. Flowers shaped themselves and developed colors, fragrances, and nectars aimed at attracting specific pollinators. Beetle flowers have strong odors, which not only serve to attract but also to identify themselves to the insects. This is important to the flower, because it promotes flower fidelity--that is, beetles prefer and can easily identify these certain species and will visit only them and so will not waste pollen on other flowers.



Honey Bee

One of the pollinators we are most familiar with is the "busy bee." Indeed, bees are indispensable in growing many of our important food crops. Here at the Reserve we see them busy at the flat-top buckwheat, the lemonadeberry, and many others. Bees do not see the red part of the spectrum; their vision perceives yellow, a mixture of yellow and ultra-violet called "bee purple," and pure ultra-violet. So bee flowers are colored whitish or bluish or yellow in our vision, but we don't really know what the colors look like to the bees as they visit the flowers to collect both nectar and pollen. Flower photographs made with film sensitive to ultra-violet light show markings invisible to us. They are among the lines and dots that we do see--nectar guides that direct foragers straight to where the nectar is, often deep inside the flower. Sweet fragrances attractive to bees and landing platforms to rest on while nuzzling into flowers are other lures. "Mellifera" means honey-bearing and "apiana" refers to the bees that visit our black and white sages, *Salvia mellifera* and *S. apiana*. Look closely at one of the flowers. You will see that it is like an open mouth with a short upper lip and a longer protruding lower lip. Upon this lower lip the bee alights. First it brushes against the stigma, depositing some pollen, and then it grabs the two stamens to probe beyond them for the nectar, thus rubbing the pollen-coated anthers against its body. The snapdragon also has an upper and lower lip, but here the bee must force the lips apart to enter. Once inside, as its long beaklike tongue reaches out to suck up the nectar, its back rubs against the stigma and anthers, which hang in the upper part of the flower chamber. Quite the opposite is the arrangement of the shooting star. Its stamens are fused into a cone that points down, while the petals are folded back to point upward. There being no landing provided, the bee must cling upside down to the anther cone. Beating its wings while it probes for nectar, it shakes the flower, causing pollen grains to fall on its abdomen, which is also rubbing against the pistil that protrudes like the point of a ballpoint pen.

Yet another stratagem was devised by the milkweeds, of which we have one in the Reserve, the twining vine with waxy lavender flowers that we call fringed milkweed. In these flowers the fused stamens and pistil are enclosed in a corona of five nectar-bearing white hoods. The flat-topped pistil has five slits in the side, in which five stigmas are enclosed in a corona of five nectar-bearing white hoods. The bee lands on the corona, resting a leg on the pistil as it goes after the nectar in the hoods. More than likely the leg slips off the hard smooth pistil top and plunges down into one of



(continued on p.6)

STIGMAS AND POLLEN (continued from p.5)

the stigma slits, rubbing off some pollen in the stigma. Then, as the leg is withdrawn, it catches on and detaches the two anther pouches, called pollinia, on either side of the slit. The pollinia twine around the bee's leg, and the next time the leg slips into a stigma slit, the pouches break and release their pollen.

Now we come to the hummingbird and the bush monkey flower. Like all flowers that attract birds, the monkey flower is brightly colored--red or yellowy orange--and has no fragrance, for while birds see color as we do, they have almost no sense of smell. The flower is shaped precisely to fit the hummingbird's bill, and the nectar is at the point touched by the bird's extended tongue. Hummingbirds' long tongues are forked at the ends, with fringed tips, splendidly designed to scoop up nectar. As the bird hovers at the flower, its head and breast press against the two white stigmas and the four bright yellow stamens, picking up and shedding pollen. When touched, the stigmas close against each other to seal in any pollen grains that may have been deposited.

Moth flowers are usually white or very light colored to be visible at night when moths fly, and many have a heavy fragrance attractive to moths. Some remain closed during the day and open only at night. Morning glory, jimson weed, and tree tobacco enlist moths for pollination, but our most spectacular moth plants are the yuccas. Each of our two yuccas has its particular species of moth as pollinator, each moth with its proboscis specially curved to gather pollen from its yucca flowers. When the flowers open, a female moth gathers pollen from one, shapes it into a ball which she carries to another flower. There she bores into the ovary, lays several eggs on several ovules, then goes to the stigma and presses the pollen ball into it. All is precisely timed so that when the seeds mature in the ovary, the larvae hatch and feed on them. Since there are always more seeds than larvae, many seeds are still untouched when the insects go into the pupa stage. Seeds and pupae fall to the ground, the seeds to await proper conditions for germination, the pupae to rest until yuccas flower again the following spring, when they will emerge to mate and begin again the reproductive process of both plant and insect. The two are totally interdependent; if the yuccas should be bulldozed away, the moths would perish with them; if an insecticide should wipe out the moths, the yuccas would cease reproducing.



The adaptations of plants and pollinators to each other are seemingly infinite. Some truly bizarre devices have been found in different parts of the world: flowers that resemble female wasps in shape and smell, bringing males to be dusted with pollen while attempting to copulate; flowers that smell like carrion, with petals that resemble hairy animal hide, all to attract the flies that feed and lay their eggs on rotting flesh; flowers that trap bees with an intoxicating nectar that causes them to slip tipsily down deep into the flower, from where their only escape is through a pollen-lined passage; and many more. But when we contemplate the exquisite detail of pollination patterns just in our small piece of the earth, we cannot but be filled with awe.

*I believe a leaf of grass is no less than the
journey-work of the stars,
And the pismire is equally perfect, and a grain of
sand, and the egg of the wren,
And the tree toad is a chef-d'oeuvre for the highest,
And the running blackberry would adorn the parlors of
heaven.*

--Walt Whitman

THE LEAST TERN by Diana Snodgrass

*(The endangered Least Tern (*Sterna antillarum*) was among the terns flying above San Elijo Lagoon Saturday, May 19, to the delight of Torrey Pines docents, who were on a field trip there. These terns are known to be nesting this year at the part of the lagoon east of I-5. The article excerpted below was prepared by Diana Snodgrass for her class in Marine Biology at Mira Costa College.)*



The name "tern" comes from the Old Norse "taerne" and the Swedish "tarna." While terns are distributed worldwide, the Least Tern is found locally during the breeding season and is only one of a number of terns which call San Diego home. What sets this one apart from the rest is its small size, its long migration route, and the fact that it has been on the endangered list in California since 1970.

The Least Tern is 9" long with a wingspan of 20". Breeding adults are gray above with black cap and nape, white forehead, orange-yellow bill with dark tip. Underparts are white, legs orange-yellow. As the bird flies, a black wedge is visible on the outer primaries. As with other terns, the beak is pointed and the tail forked (both these characteristics distinguish terns from gulls). Juvenile birds are less conspicuous: their backs and wings are a mottled buff color with brownish U-shaped markings.

Least Terns breed in colonies on open flat beaches, sand banks, unvegetated river and lake margins, usually near shallow water or within wide river channels. Birds will breed at the end of two years. At San Elijo, there have been 13 pairs during the last five years.

The birds usually arrive in San Elijo Lagoon at the end of April and breed shortly thereafter, returning to their wintering grounds in September and early October. Currently it is assumed that the Least Tern goes to South America during the winter; the only recent sighting was of some tagged birds in Costa Rica in 1985. Possibly the birds live on the open oceans, roosting on floating kelp or debris.

A Least Tern nest is usually unlined and composed of pebbles or shells on sand. Eggs are one to two inches, olive-buff/buff, marked with dark brown. Mature pairs will breed twice in a season, younger ones at the latter half of the season.

The birds' diet consists of small fish such as anchovies, top smelt, and mosquito fish, as well as aquatic invertebrates and insects. The long, sharp pointed bill is well adapted to foraging in shallow waters. At San Elijo the terns feed in offshore breakers and also go upstream in search of food. Apparently this tern hovers more than others, which normally plunge-dive into the water after their prey.

This little bird has some curious behavior patterns. During courtship, the male displays by flying up with a fish in his bill, often chased by as many as six other birds before gliding back down. The sequence culminates in his feeding the fish to his mate. Perhaps this works so well because the female anticipates being fed while sitting on her eggs! Adults recognize mates by their call and will defecate on intruders. Both adults select the nest site after trying out several spots. Both birds incubate the eggs, and the one off duty roosts communally with other colony members.

The incubation period is extended when the birds are threatened by predators. The birds will stay away from the nest, allowing the temperature to drop and influence the incubation time. Since eggs in the nest are exposed to hot sun all day long, the birds cool them by dipping their bills into water and shaking water on the eggs. The birds also pant and puff up their feathers to cool eggs.

(continued on p.8)

TPA Topics

REPORT OF APRIL AND MAY TPA MEETINGS by Sally Spiess

The counsellors of Torrey Pines Association met on April 27 and May 11. They accepted, with regret, the resignation from the Board of Frank Mannen, who felt that the press of business gave him too little time to serve. Elizabeth Nicoloff was elected to serve out the remainder of his term, which runs until 1993. She will serve as counsellor as well as membership chair, and we welcome her return to the Board.

Freda Reid was authorized to sign a contract for the printing of the third edition of the "green book," *Torrey Pines State Reserve*. We hope it will be available for sale about July 1 and that the cost can be kept under \$4.00 per copy.

Our thanks to the docent refreshment crew for accommodating our May 11 meeting. The next meeting of the counsellors will be 8:30 A.M. Saturday, July 13, and regular meetings will be the second Saturday of odd-numbered months.

TPA MEMBER RECEIVES HIGH AWARD

Dr. Fred N. Spiess, professor of oceanography at Scripps Institute of Oceanography and longtime member of Torrey Pines Association, was the recipient this year of the U. S. Department of the Navy's highest civilian award. The "Distinguished Public Service Award" was presented April 1 at ceremonies in the Pentagon, Washington, D.C. Dr. Spiess was accompanied there by his wife, Sally, recently secretary of TPA and currently a counsellor. Spiess was cited for "outstanding, distinguished service to the Navy, for world-leading accomplishments in ocean science and technology." He joined SIO in 1952 and was director of their Marine Physical Laboratory from 1958 to 1980, and director of UC's Institute of Marine Resources from 1980 to 1988. He has been an active seagoing scientist, leading an average of two expeditions a year for more than 30 years. He has received numerous other awards and was formerly head of the UC systemwide Academic Senate.

THE LEAST TERN (continued from p. 7)

Man's manipulation of the environment poses several indirect threats to the breeding areas of the Least Tern. Reducing the depth and width of water barriers has made the birds more vulnerable to predators. Depletion of the water leads to the demise of the small fish the birds eat. As water is managed to benefit the human population (sewage treatment plants, water plants, etc.), there is extreme water fluctuation, often causing nests to be inundated. Following recognition that the Least Tern was endangered in California, the number of pairs has increased from 1250 a few years ago to 1700 as a result of preservation and provision of new habitat.

At San Elijo Lagoon, the mouth may open after winter storms and allow some tidal inflow. If the mouth is not open for long enough periods of time, debris from upstream grading could drastically change the islands and channels of the lagoon. To counterbalance recent damage, channels have been dredged out to create more island space, with tern decoys placed on them to encourage passing birds to nest in the area.

The number of birds at San Elijo has not noticeably increased, but at a North Island site where pair numbers had dropped to seven because of predation, decoys have encouraged 60 pairs to return to the area. Ceramic roofing tiles placed on the ground provide shade for the chicks.

With heightened awareness of the stresses environmental changes put on this endangered species, perhaps it will come through the next century with better standing than at the previous turn of the century, when about 100,000 birds were killed for their plumage.

NATIVE AMERICANA (Library Subject List #5) by Marc Gittelsohn

(This is the fifth in a series of selected book lists on special topics available in the Docent Library.)

Balls, Edward K., *Early uses of California plants* (U.C.Press, California Natural History Guide no. 10, 1972)

Carrico, Richard L., *Excavation of a portion of Ystagua: a coastal valley Ipai settlement* (San Diego, 1983)

Carrico, Richard L., *Strangers in a stolen land; American Indians in San Diego 1850-1880* (San Diego State University, 1986)

Coles, D. Shane, *The ethnobotany of Torrey Pines State Reserve* (California State Dept. of Parks and Recreation, 1983)

Cuero, Delfina, *The autobiography of Delfina Cuero, a Diegueño Indian, as told to Florence C. Shipek* (Maliki Museum Press, 1970)

Hedges, Ken, *Santa Ysabel ethnobotany* San Diego Museum of Man, 1986)

Heizer, Robert F., ed., *California*, vol. 8 of the *Handbook of North American Indians* (Smithsonian Institution, 1978)

Heizer, Robert F., ed., *The California Indians; a sourcebook*. 2nd ed. (U.C. Press, 1971)

Knaak, Manfred, *The forgotten artists; Indians of Anza-Borrego and their rock art* (Anza-Borrego Desert Natural History Association, 1988)

Parker, Horace, *The historic valley of Temecula; the early Indians of Temecula* (Paisano Press, 1966)

Powers, Stephen, *Tribes of California* U.C.Press, 1976)

The *Torreyana* is issued monthly except for August by the Torrey Pines Docent Society and Torrey Pines Association.

Deadline for contributions is the 24th of each month. Please send to the editor:

Marion Dixon
2355 Avenida de la Playa
La Jolla, CA 92037

Staff: Glenn Dunham, Pat and Parker Foster.

* * *

Address changes go to:

Carol Lewis, Mbrshp Chair
12908 Candela Pl.
San Diego, CA 92130

Notice

The July *Torreyana* will be mailed a week later than usual because of the editor's schedule and the July 4 holiday. You should receive it the week of July 8.

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Docents: A page is missing between pages 42 and 43 in the "Native Plant List" in the *Docent Training Manual*. This page is now available from Grace Martin if you did not receive it at the May meeting.



JUNE DUTY CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>DUTY HOURS:</p> <p>MONDAY & FRIDAY 10:00 - 1:00 1:00 - 4:00</p> <p>TUES., WED. & THURS. 11:00 - 2:00</p> <p>WEEKEND Lodge: 10:30 - 1:30 1:30 - 4:30 Walk: 11:00 - 2:00 1:00 - 4:00</p>						1
2	3	4	5	6	7	8
L. LEWIS L. NIMICK L. DIXON	10-1 TALBERTS HUBER JAMES	MARTIN	ESTEY	VALE	10-1 GITTELSON 1-4 S. MASSEY	L. SANDSTAD L. KOOPMAN L. SANDSTAD L. BROWN
9	10	11	12	13	14	15
L. LEWIS L. CHEVEY L. DIXON	10-1 WATSON JAMES	MARTIN	SJODGRASS	GITTELSON	10-1 NICOLOFF 1-4 D. GREEN	L. HELLER L. LIU L. CHEVEY L. LIU
16	17	18	19	20	21	22
L. WATSON L. CHEVEY	10-1 TALBERTS JAMES J. GREEN	D. GREEN	MARGULIES	GITTELSON	10-1 S. MASSEY	L. TAYLOR L. ROBERTS L. MORROW L. TAYLOR
23	24	25	26	27	28	29
L. HELLER L. CHEVEY	10-1 JAMES 1-4 P. FOSTER	AMALIA'S	MARINE	MARGULIES	10-1 NICOLOFF 1-4 MARINE	L. ROBERTS L. ROBERTS



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FIRST CLASS

FOR

