



TORREYANA

THE DOCENT NEWSLETTER FOR
TORREY PINES
STATE NATURAL RESERVE

Issue 361

June 2015

Who's to Say a Plant is Native?

by Pat Finn

We hear about native plants all the time. Concerned drought monitors exhort us to replace our green lawns with natives. We shop native plant sections in local nurseries. We gaze at them in the San Diego Botanic Garden and at the fair each year. We talk about native plants frequently in the Reserve.

But once you start thinking about it, the question of what a native plant really is seems impossible to answer. After all, who can say what was growing here before humans arrived with their favorite seeds? Well, no one, of course. But there are ways to unearth some of this mystery, and that is one of the jobs of Dr. Eleanora Robbins of SDSU's Department of Geological Sciences.

Robbins is a biogeologist, and she spoke to the TPDS in May on palynology, which is, if you're unfamiliar, the scientific study of spores and pollen. It turns out that these are very durable. In fact they last for eons, and scientists can even dig them out of rocks. If you can afford to dig deep -- really deep -- you can actually find out what grew where when. The trouble is finding the funds.

Palynologists, says Robbins, have found evidence that sunflowers, spruce, walnut, ash, palm, and avocado existed in the Anza-Borrego Desert before people. Another fertile palynology hunting ground in Southern California is the La Brea Tar Pits. Otherwise, the field is a giant jigsaw puzzle with random corners and the occasional border filled in from time to time through persistence, deduction and ingenuity.

Looking at the world-wide distribution of plants used as medicine -- yarrow, wormwood, California poppy, strawberries, and mallow, for instance -- the palynologist looks for north-south or east-west distribution and attempts to calculate how long it might take to move from one side of the world to another. And for that, there are unexpected tools, like a container full of Nike shoes which fell off a ship in the Pacific in 1990.

Docent General Meeting

Saturday, June 13, 9 am

Location: St. Peter's Episcopal Rec Hall, Del Mar

Speaker: Markus Spiegelberg, Center for Natural Lands Management cnlm.org

Topic: Ecologist Markus Spiegelberg specializes in land stewardship and is the speaker for the June meeting. He grew up in La Jolla and went frequently with his parents to the Reserve, which he recognized as a special place, even as a child.

Markus did his undergraduate work at Berkeley and got a Masters in Ecology at SDSU. He has worked in San Diego for 25 years in both government and private biological consulting. He has been at the Center for Natural Lands Management, a non-profit land management company founded in 1990, 15 years. The company specializes in land stewardship, primarily lands set aside as part of the Natural Communities Conservation Program (NCCP) mitigation process. He will speak about this process, and about how to manage properties to protect plants and animals.

Refreshments: Docents with last names beginning with M, N & O will be responsible for providing snacks for this meeting.

To a palynologist, this financial loss for Nike meant an opportunity to determine how long it takes for sneakers to migrate to Fiji, Tahiti, Hawaii, and eventually back home to Portland.

Digging deep into the earth 60 feet or more can provide evidence of when an area was inhabited by indigenous peoples through finding charcoal, corn, and medicinal plants.

Inside

General Meeting Minutes	2
Children's Program	3
Docent of the Month	3
New Park Aide Elliott Beltran	3
TPDS Class of 2015	4
Signs Bloom in Whitaker Gdn	4
SD Science & Eng Fair	5
Student Abstracts	5-6
TPDS Book Club	6
Did You Know?	7
Bird List	7

The Torrey Pines Docent Society publishes the *Torreyana* monthly, edited by Joan Simon and Pat Finn on alternate months, and is formatted and produced by Roger Isaacson. Submissions are due on or about the 20th day of the preceding month and may be emailed to

Editors@torreypine.org.

Circulation manager: Marian Casazza
Extra copies of the printed *Torreyana* may be found in the docent library.

Please send postal/
email address changes to:

Torrey Pines Docent Society
P.O. Box 2414, Del Mar, CA 92014

Attn: Membership or email to

Membership@torreypine.org

Web sites:

TP Docent Society: torreypine.org

TP Association: torreypines.org

Visitor Center phone: **858.755.2063**

TPDS 2015 Board Members:

President: Frank Burham

Vice-president: Ingo Renner

Treasurer: Gerry Lawrence

Secretary: Annette Ring

Dir. of Communications: Roger Isaacson

Dir. of Children's Program: Janet Ugalde

Dir. of Programs: George Beardsley

Dir. of Training: Diane Stocklin

Dir. of Lodge Hosting: Jan Lombardi

TPSNR Staff:

Supervising Ranger: Dylan Hardenbrook

Rangers: Kyle Knox, Jesus "Chuy" Salinas Rodriguez, & Mike Winterton

Sr. Park Aides: Louis Sands & Johnson Jou (Interpreter)

Park Aides: Elliott Beltran, Samantha Collins, Joy Inton, & Jake Mumma

© Torrey Pines Docent Society
Since 1975

All rights reserved

FLASH From Joy Inton: Don't forget to donate your ZooNooz magazines to the Museum Shop.

The arrival of Europeans is signaled by sediment caused by tree removal, as well as gold and exotic plants. It is possible to be more exact about which plants are native and which were brought by indigenous peoples or Europeans, but that would take money. Lots of it. And, as Robbins noted with a sigh, no one wants to fund this kind of research.

Torrey Pines Docent Society General Meeting Minutes

May 9, 2015

Meeting called to order at 9:05 am by **Frank Burham**.

Speaker: Dr Eleanora (Norrie) Robbins, Ph.D., Lecturer at SDSU at the Department of Geological Sciences. Posed the questions: What is a native plant? When did it arrive? How do we know?

Spotlight on: Johnson Jou was recently promoted to Senior Park Aide for interpretation. Johnson gave an overview of what he plans to do in his new role.

1. Update the displays at the TIK with more posters and more booths.
2. Enhance the museum displays, including apps for bird calls.
3. Jr. Ranger program. Dates are June 22 (birds), 23 (plants), 24 (tide pools), 30 (insects & spiders), July 1 (Guy Fleming hike). Hours: 9:00 am to 11:30 am. Ages 7 to 12 only. There is also Little Rangers for ages 4-6, lasts 45 minutes starting at 11:30 each of those days. Info for both at this link:
tinyurl.com/TPSNRJRangers2015
4. Interpretive workshops for docents, 2 days, 1.5 hours each.

Special Events: Frank Burham announced that in September the TPDS will be 40 years old. Back in the beginning it was 100% about interpretation. In those early days docents did Lodge hosting and public walks only. He reminded us that interpretation is our primary mission as docents of TPSNR.

Docent of the Month: Michelle Kurtis Cole for all of her hard work with the Seabees. They've put two miles of eye-rod in Parry Grove (finished) of the six miles planned for other trails. They helped out at the San Elijo campground, worked on the Whittaker Garden signs and have fixed many items that have come in on the fix-it report.

Whacky Weeders: Lynne Small said the weeders meet at 8:30 am on Mondays and 9:30 on Thursdays for 1.5 hours. Anyone wanting more information can email Lynne (see Membership List).

Museum Shop: Nancy Woodworth announced that there are two new items available at the museum shop: new ceramic tiles, and bowls made from wood from Torrey pine trees felled due to bark beetle infestation.

Science Fair: Wayne Kornreich mentioned that two winners of the Science Fair will present to the TPDS at the next General meeting.

General Announcements:

Wes Farmer will guide an ebb tide nature walk on Thursday, May 14, 2015 at 11:30 am.

Elliott Beltran, trainee in the Class of 2015, has been hired as a park aide. Congrats Elliott!!

Frank Burham is looking for a grant writer, please contact him if you have such talents.

Refreshments: For June's General Meeting docents with last names starting with **M, N & O** are responsible for snacks.

Meeting ended at 11:06 am

Children's Program

by *Louis Sands*, Children's Program Coordinator

Summer is around the corner, which means another year of the TPDS Children's Program is coming to a close. The 2014-15 program stats are impressive:

- 40 schools served
- 17 of those schools (43%) have received a Title-I designation
- One school with 100% special needs students visited for the first time
- One home-school collaborative

This makes a grand total of 3,767 student participants! And how about those amazing children's program docents? This was the year of flexibility. Docents experienced everything from soap-less public restrooms to *three* different locations for our program presentations. Respecting the needs of our deserving student visitors was always first priority, as docents provided more than 1,100 hours of service over 70 program days.

A hearty thank you to the following docents who logged hours in Volgstics this year for the Children's Program:

Deb Balch, Joellen Barnett, Hank Beck, Frank Burham, Walt Burkhard, Pao Chau, Kathy Dickey, Peter Domaille, Bob Doolittle, Wesley Farmer, Margaret Fillius, Karen Fraser, Mary Friestedt, Kathy Glasebrook, Paul Howard, Joy Inton, Marie Johnson, Johnson Jou, Barbara Justice, Bobbi Krueger, Mona Kuczanski, Greg Lafreniere, Molly McConnell, Joe Meyer, Joanna Proctor, Sue Randerson, Ingo Renner, Annette Ring, Stu Rosenwasser, Ann Smith Mercandetti, Janet Speer, Lynne Truong, Janet Ugalde, Rick Vogel, Barbara Wallach, Nancy Walters, Arlene Weirnerman, Sally Whitlock, Ann Williamson, Cindy Wollaeger, and Linda Zlotnik.

Docent of the Month:

Michelle Kurtis Cole

Photo by Herb Knüfken

I joined TPDS because I love the Reserve. It's beautiful. I was married on the Parry Grove Trail! That sounds very romantic, but it was the day of the Witch Fire in 2007, and with all the evacuations and craziness, it's a miracle Roger and I were married at all.



I really respect what the docents do to protect this treasure and wanted to be a part of that. As the new captain of the Seabees, I'm so fortunate to have a wonderful team, and I love working with them.

Outside the Reserve, I am a glass sculptor. I established the Kilnformed Glass program at UCSD and own Michelle Kurtis Cole Studios in Cardiff. I formerly lived in the Washington D.C. metropolitan area, where in addition to my glassmaking I was a Senior Systems Engineer for Cisco Systems and owned a dance studio where I taught ballet and contemporary dance. I live in Del Mar Terrace with my husband Roger and my son Jacob. We enjoy surfing, swimming and hiking in Torrey Pines State Natural Reserve!

Meet New Park Aide, Elliott Beltran

Elliott Beltran has a Bachelor of Science from UC San Diego in Environmental Systems with emphasis in ecology, behavior, and evolution and a minor in theatre arts. While earning his degree, he focused on becoming an advocate for conservation through informal education, and began by teaching ocean science to the public at the Birch Aquarium. When he wasn't studying or teaching, he enjoyed immersing himself in nature whether he was running on beaches, hiking trails, looking into tide pools or scuba diving. In addition to becoming the newest park aide, Elliott has also sought to become part of the Docent Society at TPSNR where he plans to further its efforts to educate the public about the natural history and resources within the Reserve. He currently lives in Murrieta where he enjoys cooking for his fiancé and their two cats.

Presenting the TPDS Class of 2015

by Dan Hammer

Bright and early on Saturday morning, March 7th, 29 sleepy TPDS freshmen snapped to attention as Director of Training **Diane Stocklin** called the class to order to begin three months of docent training.

Like its predecessors, the Class of 2015 is an interesting group of people from various walks of life. Here, in their own words, is what a few of them have to say about their interests and goals as docents:

Frank Chisari, a retired virology professor from Del Mar, is interested in the evolutionary history of our Torrey pine trees, the microbes they need for survival and the ones they need to avoid. **Linda Chisari** has practiced residential landscape design for the past 35 years and is eager to learn more about the native plants in the Reserve that might have adaptability to her clients' gardens during these drought-prone times. **Steve Neal**, retired airline pilot, finds it rewarding "Dumpster Diving" and collecting the cans/plastic bottles from the recycle bins with the Green Team. **Stefy Zambetti**, a researcher at UCSD, is focused on comparing the chaparral plants with the *Macchia Mediterrane* (Mediterranean scrubs) ones, in particular the Torrey pines with the maritime pines. **Guy Lawrie** considers himself a lucky fellow who found healing from a health challenge in a place well worth preserving for the next hopeful soul.

After teaching children indoors for 38 years, **Patty and Bruce Montgomery** look forward to spending time discovering the outdoors with them. **Dale Williams** is a retired Caltrans landscape architect looking forward to impressing people with all his new knowledge. **Debi Buffington**, a retired environmental and meteorology educator and professional artist who moved to San Diego six months ago from the Washington, DC area, is thrilled to finally understand wave-cut terrace mesas, and is looking forward to working in the children's programs. **David Buffington**, a new California resident, is excited to learn about the native flora and fauna of San Diego. And I am a recently retired U.S. Senate staffer looking to do weeding, writing, and children's walks with the TPDS.

And a word from one of our educators: **Jeannie Smith** and the rest of the training team are totally blown away by the talent and dedication and energy manifest in the Class of 2015!!!

We in the Class of 2015 are equally impressed by the superb trainers, guest speakers, and TPSNR staff who have done so much to teach us about this extraordinary place on earth. We hope you will join us at St. Peter's on June 13th as we graduate from training and enter the ranks of active docents.

Signs Bloom in Whitaker Garden

by Pete di Giralomo

Photos by Barbara Wallach

A joint effort by the Lodge Garden Committee to produce new plant signs and the Seabees to install them in Whitaker Garden was successfully completed on May 19th. This was "no walk in the park" as the garden is located on the nearly rock-hard Linda Vista formation, also the site of a former unpaved parking lot. This is further testament to the ability of our native Chaparral and Coastal Sage Scrub to find a home in an uncompromising environment.

The Whitaker Garden was established by Dr. Thomas Whitaker in memory of his wife. He served as TPA president and was instrumental in the acquisition of the Extension. The individual plant signs will be followed by additional signage to honor Dr. Whitaker, give an overview of the Whitaker Garden, and celebrate the amazing panorama of "Scripps Overlook" on the ADA trail beyond the Garden.

We hope this interpretive effort will enrich the experience of all those visitors who hike down to the newly-opened Parry Grove Trail or just head out to what is perhaps the best view in the Reserve.





Greater San Diego Science & Engineering Fair

by Wayne Kornreich

Photos by Wes Farmer

For 2015, the TPDS judging team selected two deserving students to receive awards: “Investigating Lichen Recovery in the Burned Coastal Sage Scrub Community” by Hannah Crousore, Rhoades School, grade 8, advised by Roxanne Hunker, teacher; and “Plant Growth in Coastal Sage Scrub Burned vs. Unburned Areas” by Samuel Kahn, High Tech Middle School, grade 7, advised by Maureen Ruchhoeft, parent. Hannah and Samuel each received a Certificate of Achievement and a check in the amount of \$250 from the TPDS. They will present their projects at the June 13th docent general meeting during the “Spotlight On” part of the meeting and will receive a State Park parking pass for the year. The official GSDSEF placement was 1st for both of these projects and they were thereby selected to enter the California State Science Fair. Additionally, Hannah and Samuel received numerous professional society awards. **Hannah:** CSSF Qualified; Broadcomm Nominated; San Diego Zoo Global. **Samuel:** CSSF Qualified; Broadcomm Nominated; San Diego Horticultural Society. Many thanks to the TPDS judging team for their time and energy in selecting this year’s winners.

for humans and animals, fixatives in perfume, ointments, dyes, and pollution monitoring. I wanted to find out if there was a specific species of lichen that resurfaced most quickly after a fire, as well as which lichen species had survived the fire, if any. I also wanted to see if there was a difference in the population of lichen in relation to proximity to the burned area. The fires personally affected me, and it was a great concern of mine to determine which lichen species remained.



Judging Team: Front Row: Sheldon Krueger, Wayne Kornreich, Sally Whitlock, Frank Burham. Back Row: Lillian Lachicotte, Denise Sunseri, Paula Shaw, Wes Farmer.

Student Abstracts

Investigating Lichen Recovery in the Burned Coastal Sage Scrub Community

by Hannah Crousore, Rhodes School, Grade 8

I chose to study the effects of the May 2014 fires on the lichen of the Coastal Sage Scrub community in Northern San Diego County. Lichen has many uses, including food

Each time I encountered lichen, I filled out a lichen log form which I created, documenting the air temperature and humidity measurements, weather of that day, soil pH, lumens, and moisture levels, the distance to the nearest roadway or highway, the distance to the burned area, the width, color, and texture of the lichen thallus, the surface on which the lichen was encountered, and the common and scientific name of the lichen that I found.

At the first burned area I found two samples of crustose lichen, one sample of foliose lichen, and one uncategorized sample of lichen. At the second location, I found six samples of crustose, five samples of foliose, and one uncategorized sample of lichen. At the third trail, I found twelve samples of crustose and three samples of foliose. At the final location, a restricted burned area to which I got access, I encountered five samples of crustose lichen and one uncategorized sample of lichen. 94.6 percent of the lichen that I documented were found on tree bark, and only 5.4 percent of lichen were found on the ground. 67.6 percent of the lichens that I encountered were crustose, 24.3 percent of the lichens were foliose, 0 percent of the lichen were fruticose, and 8.1 percent of the lichens observed were

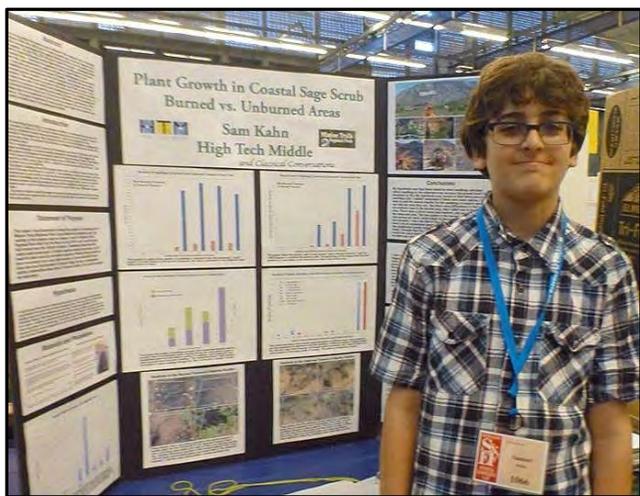
uncategorized. As a control, I had observed two of these regions for lichen before the fire.

Comparing this study to the lichens that can be discovered in the Torrey Pines Reserve, some of the recurring lichen species were Common Greenshield (*flavoparmelia caperata*), Whitewash Lichen (*phlyctis argena*), and Fluffy Dust Lichen (*lepraria lobificans*). All three of these lichen species thrive in the climate that is created by Southern California, especially in the Torrey Pines Reserve.

Plant Growth in Coastal Sage Scrub: Burned Vs. Unburned Areas

by Samuel Kahn, High Tech Middle School, Grade 7

Mission Trails Regional Park in San Diego, CA has 5,000 acres of mostly coastal sage scrub and chaparral habitat, which are endangered because of people building on them, fire, and non-native species. On July 13th, 2014, 95 acres burned in the park. I investigated plant regrowth in areas that burned versus unburned areas by putting down two 8 meter long transect lines. I put down four quadrats (1 meter square frames) on the transect lines, and observed the number and types of existing plants and new seedlings. I took data once a month for five months. I saw that there were many more seedlings in the unburned area than in the burned area, though when I looked at how many species of native vs. non-native seedlings were there, my data is still inconclusive. There were more non-natives like clover and mustard in the burn area. I just need to wait until I can identify more seedling types to do a definite count. Another part to my project was planting native seeds in burned soil and unburned soil taken directly from the sites to see if there was a difference in germination. More seedlings grew in the unburned soil, but too few germinated to be sure of a real difference. My study is important for learning how Coastal Sage Scrub recovers from fire, which is useful since it is an endangered habitat. I plan to do my project for several years at Mission Trails.



Torrey Pines Book Club

by Ken King

First of all, thanks, **Marty Jacobson**, for hosting our spirited discussion of *Evolution's Captain: The Story of the Kidnapping that Led to Charles Darwin's Voyage Aboard the Beagle* by Peter Nichols. It was a fascinating story about the complex life of Robert FitzRoy, an English Naval Officer and a scientist.

We decided on a book that next month's host, **Ann Gaarder**, recommended. It's *Balzac and the Little Chinese Seamstress* by Dai Sijie. There are several copies in the library. The date is Tuesday, June 16th at 2 pm. See Ann's address in the 2015 TPDS Member List.

Amazon's description of the book is intriguing:

Balzac and the Little Chinese Seamstress is an enchanting tale that captures the magic of reading and the wonder of romantic awakening. An immediate international bestseller, it tells the story of two hapless city boys exiled to a remote mountain village for re-education during China's infamous Cultural Revolution. There the two friends meet the daughter of the local tailor and discover a hidden stash of Western classics in Chinese translation. As they flirt with the seamstress and secretly devour these banned works, the two friends find transit from their grim surroundings to worlds they never imagined.

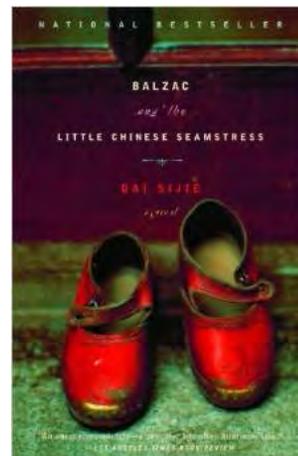
Ann and Molly wholeheartedly agree!

All TPDS docents are welcome. Meetings usually last a couple of hours. Please RSVP to **Ann Gaarder** if you plan to attend.

Since it's a short book, **Lynne Small** had the great suggestion that we start the book selected for the following meeting on July 21. It's *Guns, Germs, and Steel: The Fates of Human Societies* by Jared M. Diamond.

In this "artful, informative, and delightful" (William H. McNeill, *New York Review of Books*) book, Jared Diamond convincingly argues that geographical and environmental factors shaped the modern world. Societies that had had a head start in food production advanced beyond the hunter-gatherer stage, and then developed religion -- as well as nasty germs and potent weapons of war -- and adventured on sea and land to conquer and decimate preliterate cultures. Winner of the Pulitzer Prize, among many others.

Lynne Small wants to host the July meeting, so we're set for two months out!



Did you know?

Indian Potatoes

by Tom Polakiewicz

Around the Reserve this spring we saw the light purple flowers of Blue Dicks (*Dichelostemma capitatum*) bobbing above the coastal sage scrub. Today they are pretty to look at, but in earlier times they were an important source of food for the people living in and around Torrey Pines.

Blue Dicks are one of the many kinds of perennial wildflowers with underground storage organs that grow all over California and were cultivated by California Indians. The base of the stem of the Blue Dicks is a corm. It looks like a bulb, but doesn't have layers. So, unlike an onion, it is solid. Growing out from the corm are cormlets, small offsets about the size of a grain of rice that, when detached from the "mother corm," can grow into a new plant. California Indians used fire-hardened sticks to dig up the corms of the Blue Dicks, as well as the bulbs, tubers and rhizomes of other edible plants, that as a group they called Indian potatoes.

The Indians followed several techniques to cultivate these



plants, and as a result they increased the number of plants available for harvest. They harvested after seed set, so that seeds fell back into the ground at the site. They brushed off the cormlets and replanted them. They weeded around the sites and burned the areas to decrease plant competition and return nutrients into the ground.

Early settlers in California would see Indians harvesting Indian potatoes and derisively called them "diggers." They didn't realize that the Indians' harvesting practices were responsible for the tremendous abundance of tuber, corm and bulb plants that gave many places in California their gardenlike appearance. The California Indians tended their Indian potato plots for centuries.

With the advent of farming and ranching in the nineteenth century, the spread of houses and cities in the twentieth, and the end of Indian cultivation, most of those plots have been lost. Edible plants that once grew in some areas "as thick as grass," are now found growing singly, like the Blue Dicks we see scattered around Torrey Pines State Natural Reserve.

For more information about the California Indians' management of the environment, see *Tending the Wild*, by M. Kat Anderson in our docent library.

Torrey Pines Docent Society Bird Survey: May 2, 2015

Number of species: 73

Brant 2
Gadwall 5
Mallard 9
Blue-winged Teal 4
Cinnamon Teal 2
Surf Scoter 12
Ruddy Duck 3
California Quail 11
Common Loon 2
Brandt's Cormorant 13
Double-crested Cormorant 7
Brown Pelican 82
Great Egret 4
Snowy Egret 12
Osprey 1
White-tailed Kite 2
Red-shouldered Hawk 1
Red-tailed Hawk 3
American Coot 2

Killdeer 1
Willet 1
Whimbrel 5
Marbled Godwit 6
Western Gull 25
California Gull 8
Caspian Tern 3
Forster's Tern 1
Royal Tern 4
Black Skimmer 3
Eurasian Collared-Dove 3
Mourning Dove 11
Anna's Hummingbird 15
Rufous/Allen's Hummingbird 5
Belted Kingfisher 1
Nuttall's Woodpecker 5
Northern Flicker 1
American Kestrel 1
Peregrine Falcon 2
Pacific-slope Flycatcher 1
Black Phoebe 1

Ash-throated Flycatcher 1
Cassin's Kingbird 3
Warbling Vireo 3
Western Scrub-Jay 5
American Crow 10
Common Raven 11
Northern Rough-winged Swallow 21
Cliff Swallow 1
Bushtit 8
House Wren 5
Marsh Wren 6
Bewick's Wren 12
California Gnatcatcher 11
Wrentit 20
Western Bluebird 22
California Thrasher 5
Northern Mockingbird 4
European Starling 4
Orange-crowned Warbler 8
Common Yellowthroat 12

Yellow-rumped Warbler 1
Wilson's Warbler 1
Yellow-breasted Chat 6
Spotted Towhee 19
California Towhee 35
Song Sparrow 13
Black-headed Grosbeak 1
Red-winged Blackbird 20
Hooded Oriole 1
House Finch 50
Lesser Goldfinch 16
American Goldfinch 1
House Sparrow 6

Observers: Herb Knüfken, Frank Wong, Jack Friery, Kathy Dickey, Eva Armi, Blair Francis, Gary Grantham, and Anonymous

Herb Knüfken's amazing photo gallery, including many birds, may be found here: pbase.com/herb1rm



Torrey Pines Docent Society
PO Box 2414
Del Mar, CA 92014
(858) 755-2063
torreypine.org