



TORREYANA

THE DOCENT NEWSLETTER FOR
TORREY PINES
STATE NATURAL RESERVE

Issue 359

April 2015

The Lady Leopard Sharks of La Jolla

by Pat Finn

When it comes to understanding another species, Andrew Nosal is very aware that discovering *where* and *how* a particular animal lives and behaves is only the beginning. The *why* comes next, and it can be a bear to determine.

For Nosal, a postdoc researcher at Scripps Institution of Oceanography, the animal in question is the leopard shark, an elasmobranch (meaning it's got a cartilage skeleton to the uninitiated).

Leopard sharks don't like a lot of agitation. They prefer calm waters. So they group together in sheltered bays and estuaries along the west coast from Washington to Mazatlan. Humboldt Bay, Morro Bay, Tomales Bay are all leopard shark habitat. But take a dip in the ocean just off the La Jolla Beach and Tennis Club this spring, and you will likely find a large number of the spotted creatures swimming around. The area is neither sheltered nor an estuary. So what gives?



Leopard Shark Photo by Mark Royer

Nosal says they've been in La Jolla for eons. Literally. leopard sharks were first documented at La Jolla Shores in the 1950s, but evidence has been found of their presence there during the Pleistocene Epoch, 11,000 years ago at

Docent General Meeting

Saturday, April 11, 9 am

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

Speaker: Molly McClain of the University of San Diego

Topic: History Professor Molly McClain will speak on the life and work of Ellen Browning Scripps, who purchased much of the land where TPSNR now sits. She was a suffragist, philanthropist, founder of the Cleveland Press, Scripps Hospital, Scripps Institution of Oceanography, Bishops School, the San Diego Natural History Museum, the Zoological Garden in Balboa Park, the La Jolla Library and the now-infamous Children's Pool.

Refreshments: Docents with last names beginning with **G, H, & I** will be responsible for providing snacks this month.

the very least. And, sure enough, La Jolla Shores was a lagoon in those ancient times, no doubt as calm as, well, a duck pond. In fact, the only remnant left of that pre-historic body of water *is* the Club's duck pond.

The question for Nosal: if the lagoon is gone, why are the sharks still there, tempting fate with all the sea lions lurking about?

The sharks spend most of their La Jolla time close to shore in dangerous territory. It turns out that *all* these sharks are mature, and a whopping 97 percent are female. The males are just to the north, hanging out in a small kelp forest

Inside

Gen Meeting Minutes	2
Docent of the Month	3
Children's Program	4
Torrey Pines Bookies	4
Earth Day	5
Poem: Thank you	5
Parry Grove Ribbon Cutting	5
Anza-Borrego Trip	6
You Just Never Know	6
Witches' Broom	7
Last Lodge Concessionaire	8
Did You Know	9
Bird List	9

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.

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

off Del Mar with other lady sharks. So have the La Jolla lady sharks been dumped for younger fish? Are they consoling themselves in pricy resort waters? It's a good (if somewhat sexist) story, but unfortunately not true.

They are pregnant, and the waters of La Jolla Shores are perfect for them.

Scripps has found that the area has small waves because of a canyon just off-shore, which makes the shallow, warmer waters close in easy to get to. The mothers-to-be are probably using the relative warmth of the shallow Shores to incubate their embryos. At night most sharks go into deeper, colder water to hunt and feed. Our La Jolla sharks head straight to the canyon right in front of them.

Transmitters implanted and tracked by Scripps tell us the sharks' range and when they return to La Jolla year after year. But they don't tell everything. After giving birth, they leave La Jolla, and some female sharks go north. But about half simply disappear.

And no one yet knows where they go.

Torrey Pines Docent Society General Meeting Minutes March 14, 2015

Meeting called to order at 9:00 am by President **Frank Burham**, who welcomed the new docent trainees.

Speaker: Andy Nosal, postdoctoral researcher at Scripps Institute of Oceanography, spoke about the behavioral ecology of the leopard shark. (See front page article.)

Earth Day: **Diane Stocklin** reported that the Reserve will celebrate Earth Day Sunday, April 18th, from 9 am to 1 pm. Per **Ranger Chuy**, we have \$5000 from the State Parks to use for Earth Day for interpretation and possibly an amphitheater. There will be tables set up by the TIK with interpretive information and 30-minute docent-led walks. The weeding group will be led by **Lynne Small**; the clean-up group by **Kristine Schindler**. Ranger Chuy would like a Kumeyaay booth, and we may have a botanist at Whitaker Garden.



La Jolla Half Marathon: **Ann Smith Mercandetti** asked for volunteers to sign-up to be in the Reserve during the event on April 26th. Runners leave Del Mar at 7:00 am and should get to TPSNR about 7:45 am, so docents should be up on top by 7:30 am. Having docents with posters at these big events helps keep our Reserve from being trashed.

TPA: **Rick Vogel** announced the TPA still has \$12,000 to \$15,000 earmarked for the Parry Grove Trail, and he hopes that we may still be able to put a handrail along the stairs. It could be done if the Seabees help out with the labor, but needs to be cleared with the Rangers. He thanked the Seabees for their work getting the trail ready. It is scheduled to open by 3/5/15.

TPA plans a major campaign for funds to stabilize the Lodge. Based on the historic study, it may take between \$3 and \$6 million to complete the project. Rick hopes to see it completed by 2023, the Lodge's 100th anniversary.

Whacky Weeders: **Lynne Small** noted this is a critical time, just before the invasive grasses go to seed, and the weeders need lots of help. They meet Mondays 8:30 -10 am and Thursdays 9:30 am – 11.

Overlook Interpretative Patrol: **Bob Doolittle** said the team's focus will be

- Stemming the tide of destruction
- Restoring plants in damaged areas
- Interpretation and education

The group needs help with social media. Anyone who can help, contact Bob Doolittle.

Volgistics now has a sign-up option for Trail Patrol Overlook Interpretative Patrol (OIP). We need volunteers to help these areas recover from the public's abuse.

Seabees: **Sheldon Krueger**, long-time leader of the Seabees, announced that **Michelle Kurtis Cole**, who has worked many long hours with the team, is taking over as the leader. Sheldon asked that we take photos of anyone vandalizing the Reserve. The hope is to use social media to deter such behavior.

Special Events: **Ingo Renner** will give a Spotlight On for the field trip to Anza-Borrego at next meeting and asked that anyone who has photos they want to share to please email them to him.

General Announcements: **Frank Burham** announced that the Board has voted to defer Art in the Pines this year. It may be held in the future.

Docent of the Month: **Linda Zlotnik** was named Docent of the Month. Linda works quietly behind the scenes in many areas. She is first to sign up for the Children's Program and was among the first out on the Overlooks.

Refreshments: For the April General Meeting, docents with last names starting with **G, H, & I** are responsible for snacks.

Meeting ended at 11:15 am

Docent of the Month:

Linda Zlotnik

Photo by Herb Knüfken

I feel honored to be named docent of the month. It is a great pleasure to work with such a dynamic and fun group of people.

I grew up in North Carolina and lived in Colorado for a couple of years before moving to Palo Alto in 1984.

My family always enjoyed hiking, and I especially loved the coastal redwoods of



Northern California. After moving to San Diego in 2003, I discovered quite a different natural environment to explore. I quickly became enamored with the native plants of the area and sought to learn more about the local flora and fauna.

My introduction to the Torrey Pines Docent Society was in the spring of 2008 when my daughter, Sara, received an award for her science fair project entitled "Fire Frequency and Invasive Plant Dynamics in Coastal Sage Scrub."

She presented her project at a docent meeting and received an entrance pass for one year. This gave us a wonderful excuse to go on many hikes in the Reserve.

After the last of my three children was off to college, I had my Saturday mornings free and eagerly joined the training Class of 2010. In addition to the technical knowledge I gained about the Reserve, the training process really helped me develop the interpretive skills that I needed to interact with and educate visitors.

I now participate in many different activities, from the Children's Program to the Whacky Weeders. I especially enjoy being part of the training team as it provides me with an opportunity to share my excitement for this unique natural treasure. This winter, in the process of doing Overlook Interpretive Patrol, I was treated to many grey whale sightings and had great fun helping visitors spot the whales as well.

Children's Program

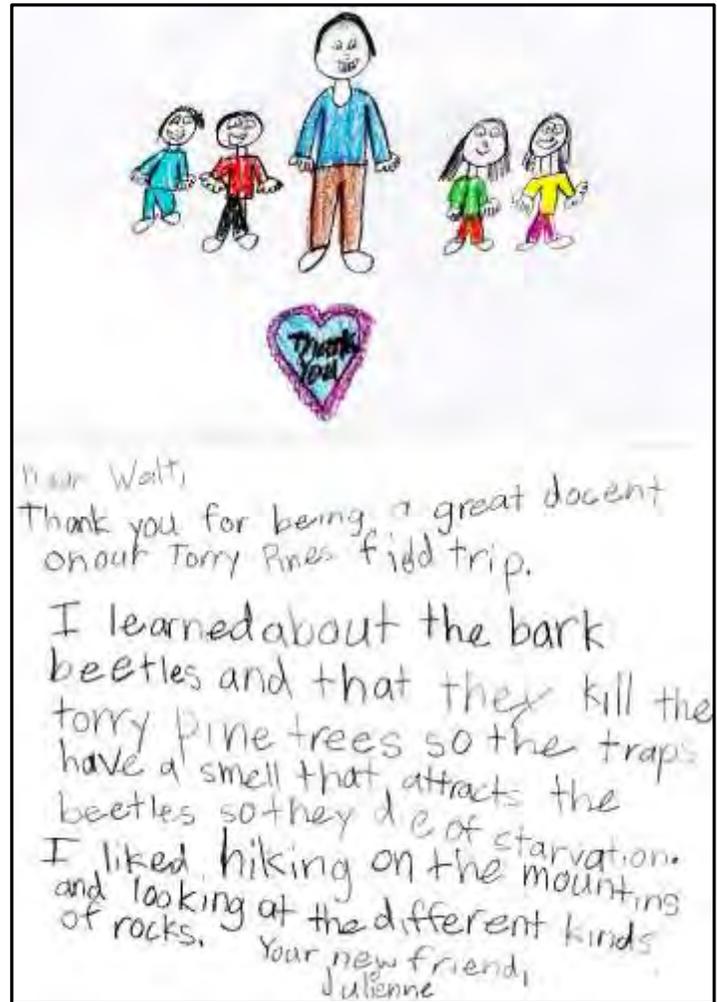
by Janet Ugalde, Children's Program Director

March began with fine flower displays. Docents were given the opportunity to show off our magnificent Reserve at its best. While many young students prefer spiders and lizards, I had the good fortune to guide a group of fifth grade girls, who truly appreciated our gorgeous blooms. I was even able to share my favorite shooting stars during their brief appearance on the Guy Fleming Trail.

March brought Children's Program docents another precious gift—dozens of adorable thank you notes from 2nd graders attending Sandburg Elementary. They rewarded our efforts with lavish praise and priceless works of art. (See below.)



Welcome new docents! Come join in the fun. Your trainers will show you how to access our schedule online.



Torrey Pines Bookies Go Bananas

by Ken King

The book discussion of *Mink River* by Brian Doyle was certainly spirited. Almost all had read it and almost all were enthusiastic in their enjoyment of the book. Thanks for suggesting it, Molly!

Our April book, suggested by Sherry Doolittle, is *Banana: The Fate of the Fruit that Changed the World* by Dan Koeppel. It has received excellent reviews, and it's time for us to read a non-fiction book. Here's what Amazon says:

"In the vein of the bestselling *Salt and Cod*, [it is] a gripping chronicle of the myth, mystery, and uncertain fate of the world's most popular fruit.

"In this fascinating and surprising exploration of the banana's history, cultural significance, and endangered future, award-winning journalist Dan Koeppel gives readers plenty of food for thought. Fast-paced and highly entertaining, *Banana* takes us from jungle to supermarket, from corporate boardrooms to kitchen tables around the world.

“We begin in the Garden of Eden—examining scholars’ belief that Eve’s ‘apple’ was actually a banana— and travel to early-twentieth-century Central America, where aptly named ‘banana republics’ rose and fell over the crop, while the companies now known as Chiquita and Dole conquered the marketplace. Koepfel then chronicles the banana’s path to the present, ultimately—and most alarmingly—taking us to banana plantations across the globe that are being destroyed by a fast-moving blight, with no cure in sight—and to the high-tech labs where new bananas are literally being built in test tubes, in a race to save the world’s most beloved fruit.”

Our next meeting:

Torrey Pines Book Club

When: Tuesday, April 21, 2 pm

Where: Cindy Tozer’s home, (Rancho Peñasquitos)—see Docent Directory

What: *Banana: The Fate of the Fruit that Changed the World*, by Dan Koepfel

We hope to see you at our next meeting

Earth Day Sat., April 18th, 9 AM to 1 PM

by Diane Stocklin

Interpretive booths and walks open to everyone in **upper Reserve** from **9 am to 1 pm**.

South Lot, Check-in table open at 8:30 am for **cleanup** starting at 9 am.

North Lot, Check-in table open at 8:30 am for **weeding** starting at 9 am.

April 22nd is Earth Day’s 45th anniversary, marking the beginning of our modern environmental movement. It remains a time of greater challenges for our Earth and for our own Torrey Pines State Natural Reserve. On Saturday, April 18th, it is our turn to lead with an Earth Day celebration. Using several interpretive presentations and walks, we hope to inspire and motivate our visitors to not only protect our treasured and fragile TPSNR habitat, but to look outward to other areas as well.

The interpretive booths include: Native plants, Kumeyaay, Entomology, TPA, Project Wildlife, “Coffee with a Ranger” and Children’s Interpretive Nature Art.

The **TIK will be Earth Day Central**, with shortened interpretive walks offered every 15 to 30 minutes, or however the need arises. We still need some docent volunteers and the sign-up sheet will be at the April 11th General Meeting and at the docent desk in the Lodge.

Arriving before 9 am will help you avoid the Saturday traffic rush. Park in the volunteer’s area and carpool from the North lot if possible.

Come have fun. Meet new people. Make a difference!

"Thank you" by rhea bridy

As I was stepping down
and down the steps to
gorgeousness, to layered
opalized slabs of rockiness
to number one hundred
eighteen mountain
goat-ness,
it swooshed by me
butterflied above me,
sea-dahlia'd beyond me.
hurrying to nectar before
being seen, while the sun
still warm and nourishing.

Above me, two sparkling ravens
observed curiously, sky-patrolled
leisurely, pelican-deferred smartly
among cliff and pine and flower
along exotic meadow-zen.
These are the real rewards,
the natural rhythms of life,
the breathing in of slow
and sea and quiet



Parry Grove Ribbon Cutting on March 15th

L-R, Sup. Ranger Dylan Hardenbrook, Ken King and Frank Burham
See more photos here: tinyurl.com/DelMarTimes-PG-Mar15

Anza-Borrego Trip

by Ken Baer

The largest state park in California is a quick two-hour drive from Torrey Pines. With 640,000-acres, Anza-Borrego Desert State Park is almost as large as the state of Rhode Island, with over 100 miles of trails in diverse canyons and peaks.

On the weekend of March 7-8, 56 docents and family members met in Borrego Springs for a day of hiking and exploration. Hosted by the Anza-Borrego Desert Natural History Association (ABDNHA), this well-respected volunteer association offered interpretive hikes led by Mike McElhatton and presented free lectures. Many in the group made a weekend of it, visiting the local restaurants and resorts and taking in the small-town charm of Borrego.

The first hike on Saturday was a morning wildflower tour, where we discovered the beauty of the desert lily and the intriguing history of the ocotillo and honey creosote, both prolific in the Park and between 100 and 200 years old. In a few weeks the ocotillo will be in full bloom, giving a crimson hue to the landscape.



Glorietta Canyon Photo by Ken Baer

The afternoon hike split the group into two camps. One tackled the wonders of Glorietta Canyon, the other the 1200-ft Borrego Mountain and slot canyon tour. Glorietta Canyon is a rocky trail near the western ridges of the Park, with a quick ascent highlighted by agave and barrel and beavertail cacti in bloom. The view into the valley was impressive. The Borrego Mountain hike is a fun trek into the narrow slot canyon, with similarities to the long-closed Fat Man's Misery trail at Torrey Pines.

The night hike, at South Palm Wash, was outstanding. Docent **Ken King** describes it: "The east-west slot was lit by a very bright moon. About 20 of us walked in about a mile or so without flashlights reaching the slot after about 3/4 mile from where we parked on the highway (S22). Mike said he gets the feeling that the moonlit walls, resembling something from *Star Wars*, made him aware that he was

standing on this rocky planet looking up at the rest of the universe. Very true! I couldn't begin to do it justice with a photograph. After walking a little longer into the slot, we stopped, sat down, and maintained silence for about 10 minutes. It was a mystical, magical, marvelous experience!"

Torrey Pines will host the ABDNHA volunteers for a hike in October.

YOU JUST NEVER KNOW.....

who you might bump into when doing Special Walks. I am able to do these walks infrequently but was delighted to find myself with a group of Road Scholars recently. This group can range in age from 30 years old to people well into their 90's. Some of them can run down the trail and others remember that they used to be able to do that. This particular morning I volunteered to take the group that requested a gentle hike on level ground with plenty of benches along the way.

Following the bathroom break, which is the first stop when they arrive, I got my group of eager seniors. Unlike some of our school groups, they all had on name tags that also had the name of their home city and state. They were a gregarious group eager to exchange names, learn about the Reserve, and thrilled to be in such a lovely place right at the ocean.

Greeting each of them and taking notice of where they were from, I was surprised to see Somerville, NJ on one name tag. This was my home town in the early 1970's. What a small world. I looked at her name, Goldie Taub, and looked at her face again. "I know you", I said. She looked up at me surprised by my comment. "You were my daughter's kindergarten teacher in 1977 at Van Holten School".



Goldie Taub and Barbara Wallach
Photo by Jeannie Smith

teacher in 1977 at Van Holten School".

You cannot imagine the excitement, picture taking, story swapping, hugging that ensued following this revelation. Talk about finding common ground and connecting with a group of visitors - this was amazing. What a great time we had during their little hike. She proudly announced that she is 92 years old and the rest of the group chimed in with their ages....94, 93, 88 and 82 years old. And they were proud of that fact! It made me feel like a spring chicken.

As it turned out, we didn't need to use all of those benches. They were physically in great shape, higher than kites and having a great time. And not one of them fell asleep during the video. Now I can't wait for the next group of Road Scholars to come to Torrey Pines. I will be the first to sign up and yep, I'll take the most senior of seniors for that little hike. Let **Ann Williamson** know you'd love to have your name on her list of special walks docents. You won't regret it.

Barbara Wallach

Witches' Brooms

by Jim Larrimore

Witches' brooms -- always a topic of discussion with visitors to TPSNR. Information available to docents leaves as a mystery why they occur. Happily I found the following information in a book by Aljos Farjon, *A Natural History of Conifers*, Timber Press (2008). I believe this will allow docents to tell not only an interesting but a factual story about witches' brooms.

There are two types of witches' brooms. One is a tree's reaction to a parasite or pathogen, occurring mostly in angiosperms but also in conifers. This leads to dwarf mistletoes in pines. Parasites and pathogens operate in outbreaks, spreading out from an initial infestation, and the witches' brooms they cause in trees are not alone for long.

It has long been understood that there are witches' brooms in conifers for which there does not appear to be an external cause. This second type of witches' brooms involves genetic mutations, an alteration in the genetic code that does not occur during fertilization. The genetic mutation that forms witches' brooms is one of the most interesting mutations, from both a horticultural and biological point of view, occurring as a bud or shoot mutation. In these cases, there is usually only a single broom in a tree (as we have at TPSNR).

Sometimes the brooms produce cones with viable seed. These cones and seeds are smaller, like everything else in the broom. When these seeds are germinated, on average, about half of the seedlings develop normally, but the other half remain dwarfish, or grow prostrate, not developing an

erect leader. As the seedlings are further selected for dwarf traits, their offspring, now taken from rooted cuttings or grafts, remain truly dwarfish. This clearly demonstrates that a mutation occurred in a bud meristem cell nucleus. The causes of such a mutation remain unknown at present, but it involves a copying error in DNA transcription. The mutation retards growth, so it occurs in a gene that determines the growth of shoots and everything that derives from these.



Witches' Brooms south of Parry Grove entrance, 2015
Photo by Roger Isaacson



Witches' Broom near the Guy Fleming Trail entrance, 2005
Photo by Roger Isaacson

Nurserymen have long used mutant witches' brooms to grow dwarf forms of conifers. The first cultivar from a witches' broom was reported in 1836. In recent times, selections derived from witches' brooms have become a major source of dwarf conifers in cultivation. Dwarf conifers are in fashion at present and so they are produced, good ones along with not so good ones. Survival in a garden is one test to separate the bad from the good.

Edward Stiegemeier: The Story of the Last Lodge Concessionaire

by Debbie Connell Whitney

Edward Stiegemeier, who worked at Torrey Pines from 1952 until 1959, moved from Detroit to San Diego with his wife Marian and their married daughter, Elizabeth Connell, in 1947. Their granddaughter, Debbie Connell Whitney (who wrote this article) was born in 1948 in La Jolla.

The Stiegemeiers acquired the Torrey Pines Café in 1947, located across from Camp Matthews Marine Corps base (approximately in the area of UCSD's now-defunct craft center). The whole family worked in the café until they moved to the Torrey Pines Lodge in 1952, when they took over the operation and management of Torrey Pines Park. In the beginning they sold apple pie and sandwiches that they handmade. Later they added ice cream, soda and snacks. They also sold a variety of ceramic items that were brought in from Los Angeles.



Pa and Debbie

In addition to running the concession in the Lodge, Edward Stiegemeier was the caretaker of the grounds. This was the love of his life. He monitored the picnic and surrounding areas and picked up the trash. At night he sometimes had to chase away cars that were parked there, but never had any problems with the trespassers ("Okay Pops, we'll leave.") He was well liked by visitors. He wore a pith helmet with

two Torrey Pines trees on it that he had painted himself. Edward took time to teach his granddaughter Debbie about the wild life and plants in the Park and how to hike the canyons and stay out of danger. When Debbie was older she led her own hiking groups.



Grammy, Pa & Debbie

Debbie's backyard was fenced in from the backdoor of the Lodge (the rangers' entrance) to the side of the Indian oven (which they only used to burn trash). There were three sheds, one of which Edward made into a playhouse for Debbie. Every summer she would participate with the "Day Campers," a different group each week, who came from the San Diego area to Torrey Pines. Debbie was often invited to join the families who were having picnics. Her grandparents and mother would give her birthday parties on the front porch of the Lodge, with all of her classmates treated to hamburgers, hot dogs, chips, soda and birthday cake.

Although they lived nearby, the Stiegemeiers seldom saw the Guy Fleming family. The Marines used to come to the Lodge to visit and would have large picnic gatherings. There was a man who dressed like Jesus with a beard, long hair, white robe and sandals who would walk in the Park and along the beach. For years they would see him. Debbie's uncle was Prof. James R. Moriarty, a well-known local archeologist and professor at the University of San Diego, who published a number of books.

The Park was also used by people to drop off their unwanted dogs and cats. Edward would bring them home. At times the family had as many as 5 dogs and 20 cats and kittens. Edward's favorite pets were his family of skunks that would come right up on the porch where he would feed them cat food from his hand.

California State took over the Park from the City of San Diego in 1959 and gave the Stiegemeiers only one month to move. Edward was heartbroken at having to leave and was disappointed at not being hired to continue as a caretaker or park ranger. He was committed to the care and love of the park and did not receive any praise for all his years.

Did you know?

Climate Cycles

by Tom Polakiewicz

Every year California and the West experience the change between our short wet winters and long dry summers. As the Pacific High moves northward in the summer, it blocks the storms that form over the Gulf of Alaska, keeping them far north of California. In winter the Pacific High is weakened and moves south, allowing the Aleutian Low to push the storms into Central and Southern California.

Over the course of several years the trade winds over the tropical Pacific Ocean vary. In "El Niño" years the winds are light, allowing warm water to expand eastward and bringing with them heavier rainfall in the Southwestern United States. In "La Niña" years, the trade winds return to higher strength. They push the warm water to the western Pacific, causing an upwelling of cold water on the west coast of South America and drought in California.

The reciprocal of the El Niño/La Niña cycle is the Pacific Decadal Oscillation. In the warm phase of the PDO, which

lasts about twenty years, relatively warm waters in the northeast Pacific produce higher rainfall in the American Southwest and less rainfall in the Pacific Northwest. When the waters cool, again for about twenty years, the Northwest experiences greater rainfall and the Southwest has a drought. The PDO can exacerbate the effects of the El Niño/La Niña cycle.

The mightiest climate cycle of them all is the seesaw pattern between the advance and retreat of the great ice sheets. Over the last two million years the earth has experienced at least twenty glacial periods when enormous ice sheets covered much of North America and Europe, separated by interglacial periods when the ice sheets melted. It is now twenty thousand years since the Last Glacial Maximum, and according to some scientists, we may be about to enter another glacial period. But no one really knows when or whether the next ice age will return.

In the ten thousand years since people first came to Torrey Pines, the climate has gone from cool and wet to warm and dry and back again many times. There is no "normal" climate, only a place in time on the cycle between extremes.

Torrey Pines Docent Society Bird Survey: March 7, 2015

Number of species: 78

Gadwall 14	American Wigeon 40	Mallard 4	Cinnamon Teal 2	Northern Shoveler 6	Northern Pintail 1	Green-winged Teal 18	Canvasback 2	Lesser Scaup 13	Bufflehead 4	Red-breasted Merganser 1	Ruddy Duck 1	California Quail 10	Red-throated Loon 6	Pied-billed Grebe 2	Western Grebe 7	Double-crested Cormorant 2	Brown Pelican 47	Great Blue Heron 1	Great Egret 3	Snowy Egret 3	Black-crowned Night-Heron 1	White-tailed Kite 2	Northern Harrier 1	Red-shouldered Hawk 1	Red-tailed Hawk 3	Common Gallinule 1	American Coot 8	Willet 7	Long-billed Curlew 1	Least Sandpiper 2	Short-billed/Long-billed Dowitcher 4	Bonaparte's Gull 200	Heermann's Gull 1	Ring-billed Gull 15	Western Gull 15	California Gull 15	Eurasian Collared-Dove 3	Mourning Dove 6	White-throated Swift 12	Anna's Hummingbird 25	Rufous/Allen's Hummingbird 7	Belted Kingfisher 1	Nuttall's Woodpecker 2	Northern Flicker 2	American Kestrel 4	Peregrine Falcon 1	Black Phoebe 7	Say's Phoebe 2	Cassin's Kingbird 10	Hutton's Vireo 3	Western Scrub-Jay 5	American Crow 17	Common Raven 18	Northern Rough-winged Swallow 6	Bushtit 18	House Wren 6	Marsh Wren 7	Bewick's Wren 14	Blue-gray Gnatcatcher 1	California Gnatcatcher 8	Ruby-crowned Kinglet 2	Wrentit 19	Hermit Thrush 1	California Thrasher 5	Northern Mockingbird 5	Cedar Waxwing 40	Orange-crowned Warbler 5	Common Yellowthroat 17	Yellow-rumped Warbler 4	Spotted Towhee 8	California Towhee 23	Song Sparrow 24	White-crowned Sparrow 11	Red-winged Blackbird 2	House Finch 29	Lesser Goldfinch 17	House Sparrow 2
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Observers: Herb Knüfken, Frank Wong, Jack Friery, Kathy Dickey, Eva Armi, Pete diGirolamo, Blair Francis, Bob Glaser, and Anonymous

Monthly Bird Surveys back to 2005 available at torreypine.org/activities/bird-sightings.html

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



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