



# TORREYANA

THE DOCENT NEWSLETTER FOR  
TORREY PINES  
STATE NATURAL RESERVE

Issue 463

February 2024

## Lichens and Bryophytes of Torrey Pines

by Dan Hammer

There's a world of biodiversity at TPSNR that few people are aware of and virtually no one has explored in detail. **Lichens**, a partnership of fungi and algae, play a vital role in initiating the growth and development of new habitats for plants and animals. **Bryophytes** are an ancient nonvascular plant group that includes moss, liverworts, and hornworts. Though both lichens and bryophytes occur throughout Southern California, they are among the least studied of all living species.



Lichen on shrubland in Extension

Chris Wagner, curator of lichens and bryophytes at UC Riverside and Natural Resources Manager at March Air Reserve Base, is working to shed light on this hidden corner of biological research. Over the past year, she and her team of academics, government biologists, students, and volunteers have been systematically surveying the Reserve's lichens and bryophytes along with their

### Docent General Meeting

**Date:** Saturday, February 10, 9 am

**Location:** St. Peter's Episcopal Church Parish Hall, Del Mar

**Speaker:** Jon Rebman, PhD, Curator of Botany and Interim VP of Science and Conservation, San Diego Natural History Museum (SDNHM)

**Topic:** New Discoveries in the Flora of TPSNR

SDNHM was contracted to conduct field visits and herbarium efforts to improve documentation and taxonomic understanding of the botanical diversity of TPSNR. This project significantly increased knowledge of the flora in the Reserve.

Dr. Rebman has been Curator of Botany at SDNHM since 1996. He is a plant taxonomist and conducts extensive floristic research on the Baja California peninsula and in San Diego and Imperial counties. He leads various botanical expeditions each year and is actively naming new plant species from the region.

**Refreshments:** Docents with last names beginning with **T - Z** will be responsible for providing snacks for this meeting.

associated habitats. At the January TPDS meeting on Zoom, Chris gave a progress report on their efforts.

Some lichen and bryophyte species collected in San Diego County a century ago have not been found since, raising questions whether these were originally misidentified or have gone extinct. A comprehensive survey for determining baseline data is needed to establish what is common and what is rare, map the extent of rare populations, and identify associated habitats for these species. This will allow biologists to track rare populations to see whether they are reduced by external influences such as climate change. This data in turn will help park managers develop strategies to preserve and protect rare species.

The Torrey Pines Docent Society publishes the *Torreyana* monthly, edited by Joan Simon and Dan Hammer 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

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Rodriguez

**Interpreter 1:** Louis Sands

**Sr. Interpretive Park Aides:** Laura Chaing,

Lila Beth Scott, and Zuzana Volny

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Chris noted that lichens are understudied in Southern California. In 1926, Swedish lichenologist Enar Du Rietz made the first lichen identification in Torrey Pines. By early 2023, just 87 species had been identified.

Local bryophytes were even more neglected, with only eight species tentatively identified on iNaturalist and no known collections in the Reserve.

Chris and her team have come to TPSNR every other Saturday for the past year and are now almost halfway through their survey. (The red dots on the map below indicate sites surveyed so far.) They are now working their way along the south shore of the lagoon before surveying the main part of the Reserve.

As part of its survey, the team is mapping the full populations of rare species, documenting all associated habitat types, and evaluating the health and wellness of these habitats.

In just the first year of its survey, the team has identified 82 new species of lichens and 56 species of bryophytes – nearly doubling the number of identified lichen species and increasing identified bryophytes eightfold. Among these new species are 11 rare lichens and 13 rare bryophytes. Some species had never before been seen in San Diego County; *Cladonia ramulosa*, for example, had been documented only once before – in Los Angeles County in 1935 – but the team found one healthy site here (see photo below).

Lichens and bryophytes grow on a variety of habitats in TPSNR, including shrubland, sandstone, sandy flat areas, saturated seeps, narrow canyons, oak woodland forests, and rock boulders and outcrops. Many species are specific to a single associated species habitat type.

Human impact can severely damage these habitats. As you can see from the photo on page 3, for example, hikers stepping even slightly off trail have damaged a saturated seep that is home to a variety of species.

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Area surveyed in 2023



*Cladonia ramulosa*

**\* FLASH \***

Don't forget to donate your ZooNooz magazines to the Museum Shop.



Human damage to seep bryophytes along trail

Chris hopes that by documenting such impacts, the survey can inform park managers how to better protect these fragile habitats. In this instance, a line of rocks along the trail's edge could keep hikers from stepping on lichens and bryophytes and thereby degrading the unique cryptobiotic soil seep habitat.

Chris and her team are only halfway through their survey. As they proceed through the Reserve, and as the collection continues to get identified, their species count will increase



Lichen growing in oak woodland forest

substantially along with their habitat mapping.

This detailed survey will be a vital tool for monitoring rare populations of lichens and bryophytes, tracking how they are affected by natural forces and climate change, and protecting these species in the future.

If you missed Chris Wagner's presentation or want to see it again, [click here](#). For more on bryophytes, [click here](#) to read an article from the March 2022 *Torreyana*.

## General Meeting Minutes: January 13, 2024

The meeting was held over Zoom with 78 in attendance.

**Speaker:** Chris Wagner spoke on Lichens & Bryophytes and the research being done on them in TPSNR (see pg. 1).

### Docent of the Year

**Gabriele Wienhausen** (class of 2017) is our DOY. Gabriele does many docent activities including but not limited to Lodge hosting, Whacky Weeders, BLIK, TIK, Museum Committee and WannaBees. She is always near the top of the list for docent hours logged. (See January 2024 issue, pg. 4.)

### Docent of the Month

**Jerry Trust** is the January DOM (see pg. 4). Along with **Mark Embree**, Jerry is responsible for the Leaf Challenge on the Discovery Trail. Please encourage visitors to try this activity and try it yourself if you have not already done so. (See December 2023 issue, pg. 6.)

### Board Meeting and Annual Report

President **Matt Xavier** reported that the TPDS board had a very productive January meeting and retreat on 1/12/2024. Please check out the Annual Report for more details. Challenges, leadership assignments, budget for 2024, among other items were reviewed. Matt presented the

annual report with photos and slides. He showed Docent Society accomplishments and hours contributed, and gave a budget review of 2023 including projects funded, income and expenses, and surplus money. Matt also spoke about plans for 2024.

### Earth Day

Earth Day is coming up in April. More committee members and docent volunteers are needed. Contact **Lynne Truong** for more information.

### Park Road

When the road is closed docents may usually move the closed sign to drive up for activities. Remember to replace the sign before continuing the drive up.

### Vest and Badge

Remember to wear your vest and name badge for official activities in the Reserve, including any activity for which you log hours in Better Impact.

### Rule Change

A standing rule change for logging hours was passed by the Board. Docents will receive an email later today with the exact wording plus a way to confidentially vote yes or no on whether or not they approve this.

## Docent Comments and Questions

Louis Sands said that it was important for docents to record all interpretive contacts with the public. There was discussion that whenever possible docents should record this in Better Impact text boxes or at the BLIK, TIK, or Lodge.

**Malana Tabak** mentioned that the Extension was not adequately patrolled. She also said she would like to see a median number of the hours served by docents instead of just an average. Matt will work on this.

A few docents were concerned in light of our speaker's comments that we should try to help protect the lichens and bryophytes better. It was suggested that Red Butte was a special concern. **Patty Montgomery** said the Children's Program docents tell the children to avoid stepping on lichens when on Red Butte.

### Next Monthly Board Meeting

**Date:** Wednesday, February 7

**Time:** 1 – 3 pm

**Place:** Children's Pavilion (or docent library, depending on weather or number attending)

Everyone is welcome, but please let a board member know if you're coming.

See pg. 2 for list of board members.

## Children's Program

by Janet Ugalde

On a cold and windy January 11, eight seasoned Children's Program docents welcomed seven members of the docent class of 2024. We enjoyed each other's company while sharing suggestions for guiding students on docent-led field trips. A hearty thanks to all who participated!

### BLIK – Learn at Lunch

Our second speaker of the year, Mike Hastings, Los Peñasquitos Lagoon Foundation Executive Director, will be at the BLIK Thursday, February 1.

Bring your lunch, a chair, your curiosity, and questions about our lagoon. No need to register. You may claim one hour on Better Impact under Training, Cont. Education (up to 12 hours per year).

*BLIK Learn at Lunch* is the first Thursday of every month at noon at the BLIK, TP North Beach off Carmel Valley Road. All docents, park employees, and guests are welcome.

## Docent of the Month: Jerry Trust

Photo by Herb Knufken

**M**y environmental journey began when I was raised on a ranch in Riverside, California. It was a modern-day Tom Sawyer life, with a giant, canal-based reservoir including rafts and a swing. The ranch was my foundation for understanding the Circle of Life.

At age 50, I had a life-changing event and decided to take up the challenge of mountaineering. I went straight for the big stuff: Mount Shasta, Base Camp Mount Everest (and Kala Patthar's sunrise view of Everest), Mount Elbrus in Russia, Kilimanjaro, and Cotopaxi volcano in Ecuador. What I learned on these adventures furthered my understanding of the climate crisis, especially after witnessing severe glacial loss on some of the mountains. Then, after exploring the Amazon and shedding tears over the extreme loss of biodiversity, I started a blog ([Trust in Nature](#)) to help document some of the changes and alert people to the impending perils.

In 2017 I became involved with a special group of like-minded people, the docents of Torrey Pines. My old teaching friend **Mark Embree** was already a member, and with his foresight, I became involved in the Historical Character Walk of Torrey Pines and in co-creating the QR Leaf Challenge on the Discovery Trail.

One of the great joys of volunteering is being with my wife, **Lorraine**. We love hiking the trails and being Roving Interpreters. I have a special place in my heart for Torrey Pines Reserve: my first daughter is named Heather after the mountain flower, and my second is named Torrey. And like the tree, I always remind her how special and rare she is.



## How Do You Clean Taxidermy – and the Lodge too?

by Gabriele Wienhausen

The necessary ingredients for cleaning taxidermy are hands-on training from Louis, seven dedicated docents (**Dinah Carl, Jean Kelleher, Mukesh Mehta, Toni Mondini, Betsy Seible, Lynne Truong**, and me), three HEPA vacuum cleaners, five brushes, four ladders, an extension cord borrowed from Dylan, and two heavy-duty vacuum cleaners with attachments for crevices and tight areas in the Lodge.

On January 9, the Lodge was closed for the cleaning. At eight o'clock sharp, we rolled up our sleeves, put on our KN95 masks, slipped our hands into latex gloves, set up ladders, and carefully relocated most of the taxidermy specimens to the outdoor tables behind the Lodge. There we lovingly, carefully, and patiently brushed and vacuumed off dust and mouse droppings from the furry and feathery taxidermy. The transformation was magical – from mostly mousy grey to shades ranging from ebony black, reddish brown, and pale yellow to pearl white, pink, and red.



Mukesh Mehta vacuums a coyote

A few taxidermy specimens – among them the mountain lion, the bobcat, and the Great Horned Owls – could not be moved outdoors. This made cleaning more challenging. Imaging being on a ladder, balancing a vacuum on your shoulder while stretching and straining and bending your body to reach underneath an animal's belly or up to the top of its head. The outcome, however, was satisfying – fur and feathers that were once again shiny. Assessing the condition of each taxidermy on a computer spreadsheet was part of the cleaning process. This data will guide the Museum Committee in deciding which specimens need to be replaced.



Gabriele Wienhausen cleans a mountain lion

Cleaning the taxidermy provided a perfect opportunity for a thorough spring cleaning of the Lodge. Starting high and going low, every shelf was vacuumed and wiped down, and hard-to-reach nooks and crannies were tackled. Dust balls, dead insect carcasses, and animal droppings underneath and behind cabinets, as well as dirt piled up in the tile grout lines, had no chance to escape the suction of the vacuums and the equally strong resolve of the volunteers. In all, it took five hours of concentrated team effort to make the taxidermy look fresh and perky and the Lodge sparkle.

The Visitor Center may have lost bragging rights about being open every day of the year, but it gained a rejuvenated and fresh glow. This will of course not last, which is why going forward we will repeat this effort every six months, beginning next June. Interested? Watch for your opportunity to sign up and be part of the next cleaning party.



Betsy Seible cleaning a pelican

## Lanterns at the Lodge

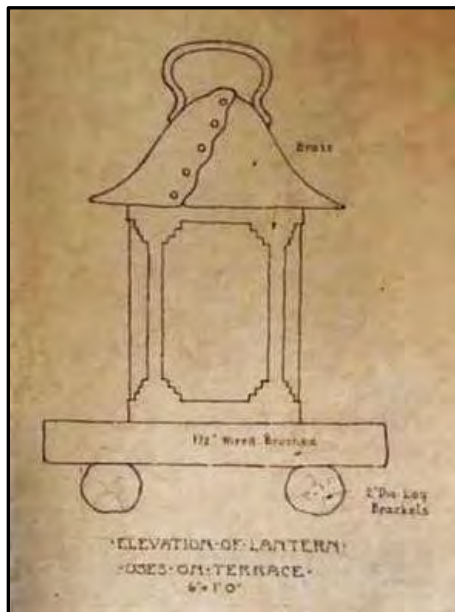
by Mukesh Mehta

Why have the porch lights at the Lodge been dark for decades? When the building first opened in 1923, beautiful lanterns lit the porch and outside of the Lodge, as shown in this historic photo:



Over the past 100 years, for reasons lost to history, the lanterns have either gone dark or gone missing. With support and encouragement from Supervising Ranger Dylan Hardenbrook and the TPDS Museum Committee, I volunteered to lead the effort to replace them. Thank you to the Docent Society for approving funding for this important project.

First, the Museum Committee selected a licensed vendor – Jim Gibson, a specialist in decorative and historic lighting – to custom-make ten lanterns according to this original scaled drawing we have on file at the Lodge:



Drawing of original lodge lanterns

Like the originals, the new lanterns would be made of brass with no lacquer coating, so they can acquire a patina naturally. Each lantern would have an LED bulb, equivalent to 60 watts.

On January 2, I held a meeting at the Lodge with Jim Gibson, Dylan Hardenbrook, and Park Maintenance Chief Chad Van Doren. Jim measured the pedestal and location of the lanterns. Chad and his team graciously agreed to complete all the electrical connections and install the lanterns. Two weeks later, we received photos of the completed custom-made lanterns as shown below:



New lanterns for Lodge / Museum

The lanterns were recently delivered to the Lodge. Chad's team will install seven of them: five in the front porch area, one near the geology exhibit, and another near the whale exhibit in the back of the Lodge. Three other lanterns will be held safely in storage until all major repairs of the Lodge have been completed.



Once the custom-made lanterns are installed, the front porch will shine as it did back in 1923, leading us from darkness to light in the spirit of Ellen Browning Scripps.

## What's on the Beach? Sand!

by Kathy Dickey

Do you have a love/hate relationship with sand as I do? I love to gaze at vistas of sand, especially at sunset over the ocean. Lovely sand is everywhere. Have you seen all the colors of sand? Black sand (mostly basalt and obsidian) from volcanic soil in Hawaii. Pink sand from dissolving coral reefs in the Bahamas. Bright sugar-white sand that is formed from dissolving shells along the Florida beaches. There are even beaches of green sand (olivine) in Hawaii and elsewhere. I once saw a beach covered with volcanic pumice stones and pumice sand in Greece.

However, there's the downside to sand: It gets into your food; it sticks to your skin and fills every crevice; where the beaches are made of whitish quartz, as in California, it can get so hot in the summer it burns your feet; it covers your car floor and car seats; and it makes for a long, messy bath for a dog or child.

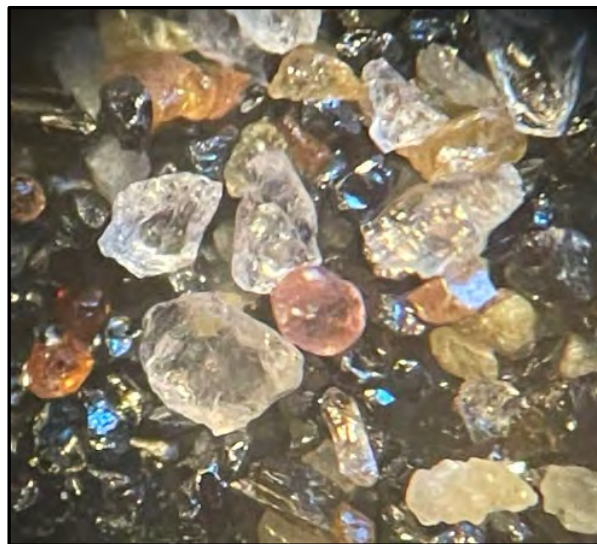
Most of the world's sand is made out of the same stuff: tiny crystals of quartz, which is made out of silicon and oxygen, the two most common elements in the Earth's crust. And as you'll know if you've ever bitten into a sandwich that had sand in it, quartz grains are small and really hard. River rocks erode slowly as they are carried to the ocean, where rolling waves and tides crush them against each other, making smaller and smaller particles. The finer the grains of the sand, the older it is.

Strolling along our dark beige (or sometimes gray-black) San Diego beaches, you might be focused on the ocean view. But if you took a [closer look](#) at the grainy mixture underfoot, you might find a record of an ancient world: tiny glinting crystals, weathered multicolored stones, black magnetite, and even the pulverized remains of mussels, mollusks, and other marine life.

My geologist friend and TPSNR volunteer Norrie Robbins and I wanted to examine more closely what is in our local sand. During the low-tide phase of the recent king tides, I collected a teaspoonful of sand from four places: the water's edge, farther up on the raised beach, even farther up the beach, and at the top of the beach berm. I washed out the salt and laid it all out to dry so we could examine the sand under Norrie's microscope. What an exciting day we had measuring and evaluating the collected sand!

We weighed out 10 grams of the fine-grained sand and put it in a petri dish. Using a very strong magnet, Norrie separated out the magnetite five times, for a total of one gram (10% of the sand sample). Examining the remaining minerals under the microscope, I expected them to be rounded, but most of them were angular. It was a vast wonderland of shapes, sizes, and colors. Norrie identified the minerals in the mix, made up of about 50% quartz, with most a white-gray color but some showing staining of reddish iron oxide and a few of yellow citrine. About 30%

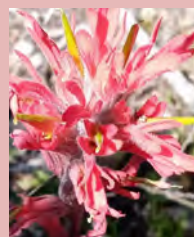
of the particles were angular and dark black and identified as hornblende or ilmenite. The rounded black grains were the remaining magnetite. We found about 3% of the sand sample contained beautiful pink to orange garnets – a surprise for us. Zircons (about 1%) showed brightly like diamonds. They were shaped like long rectangles and doubly terminated. Feldspar was present in less than 1% of the sample, as were white fragments of shells.



One puzzle for us was the lack of mica. Norrie tried a trick of swirling the sand in a plastic bag, but none stuck as expected. We hypothesized that the minerals in our collection were all heavy minerals, and the winter king tides and huge waves may have washed away the lighter mica.

### For further reading:

[Click here](#) to read "Tracking Time Through Shifting Sands: What the world's beaches can teach us about Earth's history." [Click here](#) to read Wikipedia entry on Sand. [Click here](#) to read Exploring Our Fluid Earth article on Beaches and Sand.



**Coast Paintbrush**

*Photo by Rhea Bridy*

Splash of crimson flowering  
Buzzing Anna's sipping  
Single stems from soil.

Such is rapid growth.  
But first, the winter rains.

Happy Valentine's Day!

## Holiday Activities at Torrey Pines

by Zuzana Volny, Senior Interpretive Park Aide

As we all know, Torrey Pines is a hotspot over the holidays for visitors who drop by with family and friends. In the past, we haven't hosted any holiday activities, but for 2023 we decided to sprinkle a bit of holiday magic by giving our visitors a chance to grin, giggle, and connect with nature in an educational, meaningful, and fun way. That's how the Torrey Pines Holiday Festivities 2023 came to life!

I'm thrilled to share some impressive statistics and insights from the recent festivities, underscoring the impact of these successful efforts.

From December 23 to Christmas Day, there were more than 1,200 visitors jumping into our activities, including a scavenger hunt, children's story time, and a crafting station. The engagement levels were notably high, with the scavenger hunt each day drawing more than 270 participants (of all ages), encouraging kids to hike farther than ever before to claim a prize. Along the way, participants learned more about what makes Torrey Pines a unique and special place by cracking puzzles that revealed fun facts.



Park Aide Laura Chaing at the scavenger hunt station  
Photo by Zuzana Volny

The children's story time sessions, while more intimate, were equally impactful, with as many as 24 individuals attending a single session.

The California Toyon is also known as the "Christmas Berry," which turned out to be the perfect material for creating holiday cards, with its leaves being the star in some

leaf rubbing art. This crafting station was popular with all ages, seeing as many as 170 participants in a single day.

Amid these accomplishments, I'm delighted to share one visitor's heartfelt comment: "This was a great activity for the whole family! Thank you for putting it together. Would love to see this for other holidays too!" Such positive feedback emphasizes the meaningful impact of our efforts in creating enjoyable and educational experiences for our visitors.

Moreover, the success of our interpretive activities underscores the importance of reaching visitors in real time. According to our survey, a significant portion of participants stumbled upon these activities during their visit, reinforcing the need for interpretive initiatives that captivate and educate on the spot.

The achievements of the Torrey Pines Holiday Festivities 2023 wouldn't have been possible without the dedication of several park staff and a few committed docents. Their contributions have not only made the holiday season memorable for our visitors but have also elevated Torrey Pines State Natural Reserve as an educational and enjoyable destination.



Louis Sands and Greg Lafreniere at the craft station  
Photo by Laura Chaing

As we reflect on these accomplishments, I encourage you all to consider these statistics in shaping future interpretive activities. Let's build on this success and continue to inspire a deeper connection between our visitors and the unique wonders of Torrey Pines.

## Museum Shop Spotlight

by Nancy Walters

For all those bee lovers out there, the shop now carries a compact native bee guidebook with wonderful photos and information, small enough to fit in a fanny pack. We have limited quantities to start but will be bringing in more of them soon!



## Creature Feature: Yellow-faced bumble bee

by Laura Chaing, Senior Interpretive Park Aide

While San Diego winters are quite moderate compared to other climates, it's still quite cold for our local insects. Despite the sometimes chilly mornings and nights here at Torrey Pines SNR, some days we can go on a hike and see dozens of yellow-faced bumble bees buzzing away.

These busy bees (*Bombus vosnesenskii*) are queen bumble bees emerging from diapause, a period of dormancy, and are out gathering resources to build a new colony. Like many other bumble bees, yellow-faced bumble bees are eusocial, with a single queen leading a colony of her own. During winter rains and the first wave of wildflowers, queen bumble bees look for nectar and pollen to build up their energy while searching for suitable nesting sites to start building a colony. They do not collect nesting material nor build combs, but fly around searching for abandoned animal burrows or other naturally occurring underground holes.

A queen bumble bee establishes a new nest site and colony from scratch each year! She will forage for resources and lay eggs to raise a generation of worker bees, incubating the eggs by vibrating while sitting on her nest. After a few weeks, her worker bees will help guard or clean the nest and gather nectar and pollen while also incubating and helping raise the next brood of worker bees. A colony can number between 50 and 300 bumble bees. Towards the end of the colony's lifespan, the queen bumble bee will lay eggs for new queens and drones (reproductive male bees). As winter nears, all the worker bees die off, and mated queen bees

survive and forage intensely to ready themselves for diapause to repeat the cycle.

There is so much to learn about our local bees. Take your time to see who is visiting our flowers on trail, read some of the bee books featured in our visitor center and Museum Shop, and join the Bee Monitoring Project!



### Sources:

Allen, T., Cameron, S., McGinley, R., & Heinrich, B. (1978). The role of workers and new queens in the ergonomics of a bumble bee colony (Hymenoptera: Apoidea). *Journal of the Kansas Entomological Society*, 51(3), 329–342. [jstor.org/stable/25083040](https://www.jstor.org/stable/25083040)

Bumblebee Conservation Trust. 2021. The bumble bee lifecycle.

<https://www.bumblebeeconservation.org/lifecycle/>

National Park Service. 2024. Pollinators – Bumble bee. <https://www.nps.gov/articles/bumble-bee.htm>

## Photo News



Bottlenose dolphins  
*Photo by Herb Knufken*



Docent of the Year (2023):  
Gabriele Wienhausen



2024 TPDS Executive Board at the January 12, 2024 yearly planning meeting.

L-R: Matt Xavier, Rosemary Wareham, Coach Vance, Gary McCook, Lynne Truong, Harry Proctor, Gabriele Wienhausen, Roger Isaacson, and Lisa Kakone

## Torrey Pines Book Club

We will continue to meet via Zoom at our regularly scheduled time: the second Tuesday of each month at 1 pm. Please notify **Annette Ring** if you plan to participate or need any extra help getting connected.

**When:** Tuesday, February 13, 1:00 pm

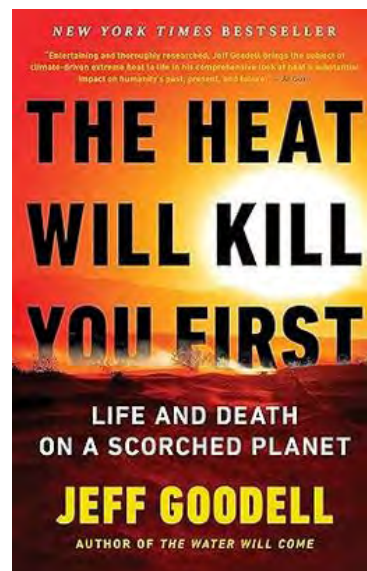
**What:** *The Heat Will Kill You First: Life and Death on a Scorched Planet* by Jeff Goodell

**Amazon says:**

*The Heat Will Kill You First* is about the extreme ways in which our planet is already changing. It is about why spring is coming a few weeks earlier and fall is coming a few weeks later and the impact that will have on everything from our food supply to disease outbreaks. It is about what will happen to our lives and our communities when typical summer days in Chicago or Boston go from 90° F to 110°F. A heatwave, Goodell explains, is a predatory event – one that culls out the most vulnerable people. But that is changing. As heatwaves become more intense and more common, they will become more democratic.

All TPDS docents are welcome. Meetings usually last a couple of hours.

**March 12:** *Being a Beast: Adventures Across the Species Divide* by Charles Foster



## Torrey Pines Docent Society Bird Survey: February 2023

*Number of species: 75*  
(+2 other taxa)

|                           |                            |                          |                              |
|---------------------------|----------------------------|--------------------------|------------------------------|
| Gadwall 24                | Heermann's Gull 46         | Cassin's Kingbird 13     | Savannah Sparrow 1           |
| American Wigeon 53        | Ring-billed Gull 3         | Hutton's Vireo 2         | Song Sparrow 39              |
| Mallard 11                | Western Gull 34            | California Scrub-Jay 7   | Lincoln's Sparrow 2          |
| Northern Pintail 11       | California Gull 86         | American Crow 41         | California Towhee 80         |
| Green-winged Teal 2       | Royal Tern 1               | Common Raven 29          | Spotted Towhee 12            |
| Redhead 4                 | Black-vented Shearwater 25 | Bushtit 41               | Red-winged Blackbird 5       |
| Lesser Scaup 9            | Brandt's Cormorant 16      | Wrentit 85               | Orange-crowned Warbler 10    |
| Bufflehead 18             | Double-crested Cormorant 5 | Ruby-crowned Kinglet 7   | Common Yellowthroat 3        |
| Red-breasted Merganser 11 | Brown Pelican 29           | Blue-gray Gnatcatcher 5  | Yellow-rumped Warbler 70     |
| California Quail 1        | Snowy Egret 4              | California Gnatcatcher 2 |                              |
| Pied-billed Grebe 1       | Great Egret 5              | House Wren 4             | <i>Observers:</i> Nancy      |
| Western Grebe 421         | Great Blue Heron 1         | Bewick's Wren 13         | Richardson, Donna            |
| Mourning Dove 52          | White-faced Ibis 7         | wren sp. 1               | Mancuso, Kathy Estey,        |
| Anna's Hummingbird 51     | Osprey 1                   | California Thrasher 19   | Robert Turner, Tsaiwei Olee, |
| Allen's Hummingbird 16    | White-tailed Kite 2        | Northern Mockingbird 1   | Steve Neal, Robert James,    |
| hummingbird sp. 4         | Cooper's Hawk 3            | Western Bluebird 11      | Nancy Stalnaker, Monica      |
| Virginia Rail 1           | Red-shouldered Hawk 3      | Hermit Thrush 1          | Stupaczuk, Glo Silva, Callen |
| American Coot 13          | Red-tailed Hawk 9          | Scaly-breasted Munia 7   | Hyland, Willow Eichler, Andy |
| Long-billed Curlew 5      | Nuttall's Woodpecker 9     | House Sparrow 1          | Rathbone, Debbie Regottaz,   |
| Sanderling 6              | Northern Flicker 4         | House Finch 49           | David Walker                 |
|                           | American Kestrel 4         | Lesser Goldfinch 16      |                              |
|                           | Peregrine Falcon 3         | Dark-eyed Junco 3        |                              |
|                           | Black Phoebe 13            | White-crowned Sparrow 54 |                              |
|                           | Say's Phoebe 2             | Golden-crowned Sparrow 3 |                              |

View this checklist online at [ebird.org/checklist/S158376906](https://ebird.org/checklist/S158376906)

Herb Knufken's amazing photo gallery, including many birds, may be found here: [pbase.com/herb1rm](https://pbase.com/herb1rm)



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