

CARMEN DOMINGO: FROM ONE CELL TO US! In AUGUST

On Saturday, August 11, from 3-4pm, SFSU professor & researcher, **Dr. Carmen Domingo**, will help us navigate the



latest research from her lab that helps us to understand how a fertilized egg becomes a seemingly simple ball of cells and then “magically” starts to differentiate into muscle cells, for instance, and all the cell types of the body—nerve cells, lymphocytes, etc.. You will learn how something called Micro RNA

holds much of the key to the puzzle.

Carmen was raised in Southern California; daughter of a one time Jesuit priest candidate and teacher, who studied at UCLA to become an electrical engineer, she decided to go into medicine, to become a doctor. Perhaps brain surgery: “outrageous and challenging”, BUT after working in the hospital she knew that the lab and research were her passion, long having been inspired by the achievements of Dr. Marie Curie.

When she attended UC Irvine she was flabbergasted at the lack of diversity—no Latino professors and a culture that was steeped in entitlement, conservatism and wealth. She joined undergraduate labs, finally feeling at home, and continuing her pathway to the world of research.

AWESOME METAMORPHOSIS WITH BEETLE LADY; JULY 28

In her second delightful presentation designed for children from kindergarten through 8th grade, **Stephanie Doyle**, aka the Beetle Lady, will discuss the amazing transformation that so many insects undergo. From worm-like larvae, many



insects “magically” transform into the curious and beautiful adults that we know as **butterflies, beetles, bees and flies**, etc. Many other insect groups do not have such dramatic changes; she will not focus on those. Join us in the Visitor Center at **3pm on Sat, July 28**.

CORRECTION

In **Mr. Steele's** May program he correctly said: “**18,000 yrs ago coral reefs died off due to the sea level falling 400 feet, killing all the reefs that had existed before. Yet as the temperatures warmed, coral rebounded.**” However, I had responded in my article: “**Jim Steele Gives Powerful Talk on Acidic Oceans**” on p. 2, 2nd column with: “**Do we want to wait 1000's of yrs for a restoration?**”, clearly a non-sequitur that did not reflect that particular occurrence correctly; **Jim was correct.**

NATURE JOURNALING for FAMILIES with JACK LAWS in JULY

Bring a pencil, colored pencils and a sketch pad with you when you meet **John Muir Laws** at our Visitor Center on **Thursday, July 5**, for 2 hours, from 3-5pm, in a journaling lesson of the wildlife of San Pedro Valley Park. This program is for children and parents, allowing you to guide and encourage your offspring, and in turn be inspired by them.



John Muir Laws

Mr. Laws has studied the natural history of the Sierras and Coast Ranges for many years. He trained as a wildlife biologist and is an associate of the California Academy of Sciences. Jack is a regular contributor to Bay Nature magazine with his “Naturalists Notebook” of wildlife in this area.

Jack received his B.A. in conservation and environmental education from UCB and his MS in Wildlife Biology from University of Montana, with a thesis on the song development of the handsome **Lazuli Bunting**.

Visit **John Muir Laws' website** <https://johnmuirlaws.com>

HUEY AND EMIL; MONITORING KEY “TRAIL PLANTS”

Bing Huey is a champion for the protection of our native plants, especially those next to the trail, the ones that give a passing hiker the aroma and artistry of our chaparral/scrub. One of his aims is to have them left in as natural a condition as possible when the trail cutting ensues, and also to save SPVP's endangered plants from being “cleared”.

Ranger Darrick Emil followed Bing up the Hazelnut, flagging



the most critical or rare of our stalwart plants that provide food & shelter for our wildlife. Thank you to **Ranger Matthew DelCarlo** for working with the “Friends” on this endeavor. (inaturalist photo is of the

rare **western leatherwood**) *See page 8 *

ON THE TRAIL

Jim Steele made an amazing discovery—on the eve of June 21 by the horseshoe pits: 2 **ring-tailed cats**, likely the first sighting for SPVP. Jim noted all the major characteristics & voila! What a thrill!



Luckily, **Ron Wilson** doesn't just love butterflies; on May 19, he photographed a **soap plant** with its 6-petalled graceful blossom, one of the 28 Calif. natives he saw on his hike on the Valley View.



Craig Benkman

(On the Trail continued on page 4)

THE SEPARATE WORLDS ON MONTARA MOUNTAIN

Text and Photos by Bing Huey

On Saturday, 5 May 2018, the Friends hosted **Dr. Mike Vasey** for a special event centered on the theme of Microhabitats on Montara Mountain. Mike is widely noted for his study and expertise of the chaparral ecology of this area and elsewhere, and is coauthor of a book on manzanita.

Mike begins the day with a talk on these smaller systems within the grand chaparral/sage. They are local environments where organisms live, differing from & small in comparison to surrounding, more extensive, habitats. In our area, microhabitats can result from coastal fog, variable soils, elevation, & exposure. These factors can result in locations where specific plants grow at higher densities than they would elsewhere.



By influencing how & where plants grow, microhabitats can serve to increase overall biological diversity.

At the conclusion of his talk, Mike leads a group of enthusiasts on a hike up Montara Mountain to locations he's previously studied. On our way up Brooks Trail we stop to notice a substantial stand of **chinquapin**, which would be rare to see elsewhere. At the Brooks Falls viewpoint we are able to view the heterogeneous geology, a confluence of Franciscan complex, Salinian block, and granite outcrops, that allow dense stands of manzanita to grow among coastal scrub.

Our route takes us through the lower elevation communities, dominated by scrub species such as **coyote bush** and **sagebrush**, to the upper ones where one finds stands of dense chaparral. Along the way we make note of plants, such as **salal** (below) & the **tree lupine** (above, right), that are not found in the lower elevations of San Pedro Valley Park. Past



the boundary into McNee Ranch State Park, the overlook off the trail provides a convenient stop for lunch, and we are able here to observe a low-growing prostrate form of the **Montara manzanita**, shaped by the persistent high winds.

At the North Peak access road, we turn downhill and then off on a side trail through dense chaparral that brings us to the granite outcrops.

Plants we find here, after scrambling down some rock faces, include **barberry** (right), **stonecrop**, & **rock cress**. (below) *See photo of this microhabitat on pg. 8.*



It is a rare opportunity to be able to see such a distinct & well demarcated microhabitat located amid a more extensive habitat.

The organized hike concludes here & the participants return via their favored routes.

Our president, **Jim Steele**, helps with shuttling some of the hikers. It's a rewarding day, spent with a knowledgeable & generous ecologist giving a group of lucky participants an eye-opening new way to look at one of our familiar landmarks.

REMINISCING ABOUT FRIENDS BBQ, HAB. RESTOR. DAY

by Judy Bacon and Mila Stroganoff

May 19: The prickly part began at 9am; we had pushed to get some volunteers for Habitat Restoration, and "Friends"



members **Adrian Stroganoff & Istvan Puski** plus volunteer **Margaret Carroll** one other & two rangers went out to get their hands dirty. They removed a large amount of **Italian thistle** from the Weiler entry hill. We hope more members will come to Habitat Restoration every month on

the 3rd Sat. Simply arrive outside the Visitor Center at 9 am.

Then the fun started! We had 32 people come to our barbecue! **Joseph Piro** in chef's hat, kindly provided by Judy, was the star cook, along with brother **Eric**. Hot off the grill were burgers & hot dogs—all the fixin's too. **Mila** did not get much time to eat as she was the bartender making mimosas for the crowd.

Scott Hill was playing the guitar and singing in the visitor center so our local dancers could rock out.

Adrian & Mila were out dancing



as well as **Carolyn & Yafei Yang**. **Bing, Carolyn, Judy, and Mila** had been busy telephoning and emailing members about the event and people came through with tasty salads, ahh, the bean salad!, of all sorts & desserts: chocolate cake, **Jim Mackey's** apple pie, & **Judy Bacon's** root beer & ice cream. A good time was had by all!

Our next barbecue should be around Sept. 1, and hopefully the weather will be warmer. But warm hearts will always overcome cool weather!! (*More BBQ photos pp 7*)

A NATURALIST'S PERSPECTIVE

by Jim Mackey

July/Aug. 2018

At our Friends' Spring barbecue a few commented about recent sightings of large flocks of **Brown Pelicans** along the

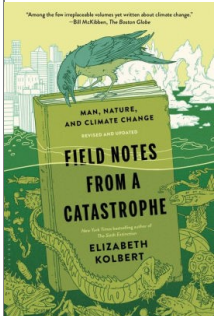


Frank Schlulenburg

Coast. It was noted that this is an annual pattern. The pelicans breed to the south in winter, then fly north to take advantage of the summer's upwelling.

But the same people said that a few decades ago pelicans seemed to be rare year-around. Indeed, biologists had discovered, in about 1970, that pelicans in the Channel Islands were failing to incubate their eggs. Apparently the shells were too thin, so were cracked by the weights of the incubating birds. At about this time, **Rachel Carson** wrote "Silent Spring", in which she argued that song birds were being poisoned with **DDT**. So, in 1972, Congress passed a ban on most uses of DDT, saving many birds, including pelicans and **bald eagles**. Then the Endangered Species Act passed in 1974! Hooray for the good old U.S. of A., and Rachel Carson!

I would like to give my highest recommendation for two books: "The Sixth Extinction, an Unnatural History", by **Elizabeth Kolbert**, 2014. Mrs. Kolbert is a staff writer for The New Yorker. She has also written "Field Notes from a Catastrophe; Man, Nature, and Climate Change", rev. ed. 2015. (She also has three sons.) Wow! The first title refers to a presumptive sixth mass extinction in the history of the world, which is termed "Unnatural" because it is being produced primarily by today's humans. **Homo sapiens** did not exist during any of the five previous mass extinctions. Mrs. Kolbert may have used the word "Catastrophe" in the



second title to refer to the 6-mile wide asteroid that collided with the Yucatan area, exterminating the last **dinosaurs, plesiosaurs, mosasaurs, pterosaurs** and **ammonites**. (This ended the Cretaceous period.) The reference to "Field Notes" in the 2nd title was well-earned by Elizabeth. She visited most of the residents and researchers to which she refers.

A population of **golden toads** in Monte Verde (Costa Rica) disappeared in one year. It was speculated that global warming might have been responsible, by affecting the cloud forest there.



But golden toads were also disappearing in Panama. Elizabeth got an invitation to visit researchers in Panama, which she gladly accepted. There they had a few of these toads in captivity and they were searching for more. She accompanied them into the jungle at night to listen for them. They were unsuccessful, but heard many other sounds - making it an amazing experience for her. Meanwhile, lab work with dead specimens of golden toads showed that they had been killed by patches of a **chytrid fungus** - that made the skin impermeable. This fungus has spread to frogs around the world, including mountain yellow-legged frogs in the Sierra Nevada (at right). But, good news: there is recent evidence that yellow-legged frogs are now evolving a resistance to the fungus!



Gary Navis

Elizabeth also walked on bloody, dead **bats** on the floor of a cave with researchers who were studying the **fungus** that produces the white nose symptom. She also visited Eskimo seal-hunters and asked them if they thought the climate had changed. They said, yes, our snowmobiles were falling through the ice, so we have to use boats now.

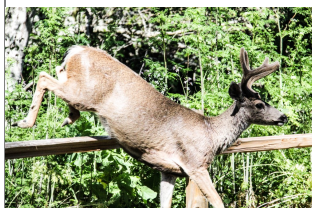
Elizabeth's visits included a farmer on an island in Denmark. The country had conducted a contest to see which community could have a carbon-neutral economy. The farmer's community had won. Many of them had constructed towers for wind-powered turbines. Elizabeth's guide turned off the rotors on his so that he could proudly lead Elizabeth up the many steps to the top to see his turbine and view the tower-studded landscape. Incidentally, the community became a public company that sells the excess electricity back to the utility, and issues stock!



Since the start of the industrial revolution, humans have burned enough fossil fuels to increase the concentration of CO₂ in the air to the highest point in the last 800,000 years! This is warming the climate & acidifying the oceans (6th Extinct., p.113). Remember that "fossil" fuels, and minerals, are non-renewable. Most of "our" coal was produced from tree ferns, et al, during the 50 million years of the **CARBONIFEROUS** Period. I expect us to really get serious about conserving fossil fuels by about 2050, as the U.S. was in 1942, just after Pearl Harbor had plunged us into World War II. We established a 35 mpg speed limit in order to conserve gasoline!



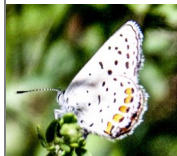
ON THE TRAIL (continued)



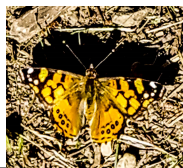
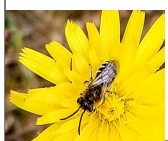
On June 1, **Ron Wilson** had enough preparation and patience to get this super shot of one of 2 **mule deer** bucks jumping over the fence by the Walnut Picnic Area.

On that same day

Ron won a shot of a female **acmon blue**; the females of this species are dark above. Then, again, patience ruled and **Ron** was able to get a shot of the underside of its lovely little wings. **Ron Wilson**

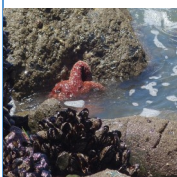


caught the images of this **Vanessa** sp. butterfly on May 19, as well as a wasp on this bright **Asteraceae** (sunflower family) at left.

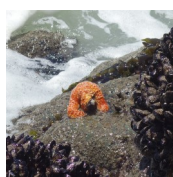


MEANWHILE ON THE COAST:

W. COAST STARFISH COMEBACK? — NO. LINDA MAR BEACH



Joseph Piro's 6/23/18 Linda Mar photos document possible trend. It's lunchtime; serve--yourself **mussels** on the menu.



LETTER TO THE EDITOR:

I'm glad that **Roger Mascio** may contribute to the newsletter. He is a regular attendee at our functions. Last week in the *Tribune* there was news about a planning commission meeting where Roger testified against a high-density town homes project that was proposed for the space formerly occupied by a nursery - between the Park Mall center & San Pedro Creek— virtually in Roger's backyard. Over the years he has done a lot of work to stabilize the banks of the creek. Our prospects for having **steelhead** & **red-legged frogs** in the Park are related to the condition of the creek downstream from us.

James Mackey

BENCH CUTTING ON POPULAR LOOP

by **Joseph Piro**

For our June 9th Trail Day, Ranger **Matthew Tolmasoff**, **Istvan Puski** and I headed out to do some bench-cutting



work up on the Brooks Falls Trail. Cutting back into the hillside & removing some places where it already crumbled/slid helped lessen some bends & make the trail a little wider & stable in those spots. We made it up to the intersection

CALENDAR FOR JULY/AUGUST 2018

JACK LAWS NATURE JOURNALING FOR THE FAMILY

Thursday, July 5.....3-5pm

JULY TRAIL DAY

Saturday, July 14.....9am

FRIENDS OF SPVP JULY BOARD MEETING

Tuesday, July 17.....7pm

JULY HABITAT RESTORATION DAY

Saturday, July 21.....9am

STEPH. DOLE, BEETLE LADY: AWESOME METAMORPHOSIS

Saturday, July 28.....3-5pm

AUGUST TRAIL DAY

Saturday, August 11.....9am

CARMEN DOMINGO'S: HOW WE DEVELOP FROM 1 CELL

Saturday, August 11.....3-4pm

AUGUST HABITAT RESTORATION DAY

Saturday, August 18.....9am

FRIENDS OF SPVP AUGUST BOARD MTG.

Tuesday, August 21.....7pm

For all events except board mtgs, meet at the Visitor Center

FACTOID

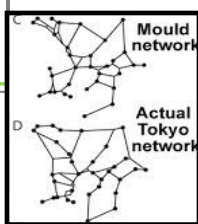
"How Brainless Slime Molds Redefine Intelligence" * In fact slime molds can solve complex mazes & more! First, they are not **molds**,

but **Protists**, like **ameba**, who ooze out tendrils of protoplasm to explore for food, & they dwell in **SPVP**! In the commonly researched **Physarum polycephalum**, each slime mold is a single celled being with millions of nuclei who can move at a breakneck speed of 1mm/hr. Surprise! these protists do not blindly flow from one place to another, but carefully explore their environments, seeking the most efficient route to a food source, such as their beloved oat flakes. When working a **maze** they leave a **slime trail** that clues them to not rework an unsuccessful pathway.



"Riding the Slime Mold Express" **

Japanese researchers placed oat flakes in a pattern that mimicked the way cities are scattered around Tokyo, then set the slime mold loose at "Tokyo". After constantly redefining the efficiency of each path many of the protists had developed pathways quite similar to the real mapped out subway system! ***Sci. Amer mag; **sciencemag.org**



with the Montara Mt. Trail. I headed back down the same way, while Matthew & Istvan came down via the Montara Mtn. Tr. to check on conditions. Things are in good shape on this popular loop; head out & enjoy! (**Istvan&Macleod-Piro**)

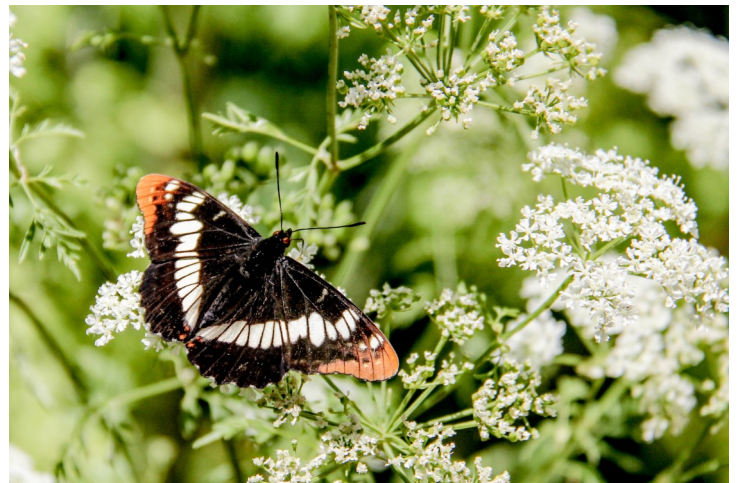
The Leaders of "the Friends of SPVP": President: **Jim Steele**; Vice President & Editor of this newsletter: **Carolyn Pankow**; Secretary: **Judy Bacon**; Treasurer: **Bing Huey**; Visitor Center Desk and Staffing: **Mila Stroganoff**; Habitat Restoration leader: **Istvan Puski**; Trail Leader: **Joseph Piro**; Membership: **Jim Steele**; Programs: **Jim Steele**; Trailside Store Manager: **open**; Membership misc: **Katie Antista**.
WEB SITE: friendsofsanpedrovalleypark.org **Letters to Ed:** Carolyn at pankowinca@gmail.com



Soap Plant, *Chlorogalum pomeridianum*



Painted Lady



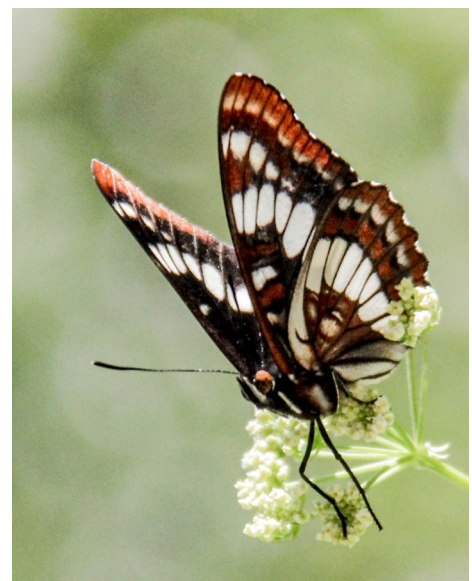
Lorquin's Admiral, June 14, on cow parsnip, WWR



Anglewing seeking minerals
from the earth



Wasp on an Asteraceae, the
sunflower family



Lorquin's Admiral, June 14 at ca 3pm on WRR

Bing Huey



"A **bee** meeting a bad end at the "hands" of a totally camouflaged **crab spider**". June 5, 2018, on the Hazelnut trail



adelid moth on an **Oregon sunshine flower** on June 5, 2018 on the Hazelnut Trail (photo cropped to show detail; notice beard-ed anterior, long white antennae & white markings on wings.)



A sartorially elegant **leaf hopper**, May 26 2018, on the Hazelnut Trail.



Left to Right Front Row: Steve Robinson, Istvan Puski, Adrian & Mila Stroganoff, Katie Beltran, Unknown
 Left to Right Middle and Back Row: Joseph Piro, James Mackey, Leo Leon and Chris, Isabel Ebert, Unknown, Barbara Daley, Phil Harris, Christine Guzman, Judy Bacon, Jack Coots, Carolyn Pankow, Jim Steele, Terry Sherar, Prudence and Larry Bothen, Susan Herring, YaFei Yang (front), Roger Mascio, Tall Eric (behind), Jennifer Alpaugh with Rob in back right, Barbara Kempster, Unknown, David Bacon, Enid Ansgarius



May BBQ photos by Joseph Piro (group shot)
 & Mila Stroganoff (2 scenes of outdoor crowd)



Bing Huey's photo of **Darrick Emil** as the prehistoric **Manzanita Man**, on their way up the Hazelnut to flag plants.

Photo shows **brittle-leaf manzanita**, complete with burl.



Bing Huey's Microhabitat: **barberry** and **stonecrop**



Ron Wilson's **stag** "in velvet", doing hurdles

VYING FOR THE "LAST SPLASH" AWARD: Judy Bacon's "Mila Mimosa " & Joseph Piro's "The Fury" at Linda Mar

