



MAGPIE CALLS

Newsletter of the Santa Ynez Valley Natural History Society
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*Dedicated to the study, exploration, and appreciation of natural history
in the Santa Ynez Valley region.*

Dear Members and Friends of SYVNHS...

by Dennis Beebe, SYVNHS Board President

I am stoked with the board's vote to make me your new president. I will continue Charlie Stauffer's lead and the Society's mission to do my part to bring informative and entertaining programs to our membership and the public. We completed a successful, well-attended Spring 2016 program that concluded with a trip to Vandenberg Air Force Base to see Chumash rock art and the natural wonders of South Base. My thanks and congratulations go out to all those who made the entire Spring 2016 program possible, particularly our energetic Board members.

I think you will find our Fall 2016 list of programs to be loaded with interesting lectures and field trips. Our Society may be apolitical but that doesn't mean we shy away from controversial subjects. For example, global warming or climate change is certainly a contentious issue and our lead off program with Jim Powell addresses just that. Our Fall programs also tend to explore beyond the SYV, with field trips elsewhere in Santa Barbara County and also into San Luis Obispo and Ventura Counties. With the help of our

Upcoming SYVNHS Lectures and Field Trips

- Sep. 15 Global Warming: Could Scientists be Wrong? (lecture)
- Oct. 1 Santa Barbara Geology (field)
- Oct. 11 King Sequoia (lecture)
- Oct. 15 Wild Condors (field)
- Oct. 27 Grizzly Bears, Biodiversity, and Fire (lecture)
- Nov. 5 Time to Choose (film)
- Nov. 19 Parasites and Food Webs in Local Estuaries (lecture)
- Dec. 3 Birds and Restoration of Devereux Slough (field)
- Dec. 11 Morro Bay and Montaña de Oro (field)

expert lecturers and field trip leaders we will examine some of the extremes of our natural world, from microscopic parasites to the King Sequoia. I'm looking forward to these programs and to working with our newly constituted board, including new members Len Fleckenstein and Sam Spaulding, and returning board member Tim Matthews.

I would enjoy hearing from you at any time; constructive criticism and suggestions for future programs are always welcome.

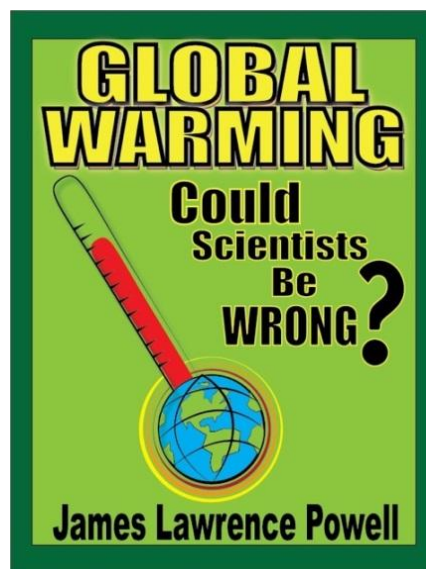
Upcoming Lectures and Field Trips

Global Warming: Could Scientists be Wrong?

Free lecture and book signing with James Lawrence Powell
Co-sponsored by Solvang Library
Thursday, September 15, 7:00 p.m.
Legion Wing, Veterans Memorial Hall,
1745 Mission Dr., Solvang

Scientists have been wrong before: think of continental drift, deep time, and meteorite impact. Could they be wrong today about global warming? If so, how exactly? The stories behind these four discoveries reflect more than the fascinating push and pull of scientific work. They reveal the provocative

(Continued next page)



nature of science and how it raises profound and sometimes uncomfortable truths as it advances. Dr. Powell will also be signing his latest book, *Four Revolutions in the Earth Sciences: From Heresy to Truth*.

James Lawrence Powell lives in Buellton and serves as executive director of the National Physical Science Consortium. He received his Ph.D. from the Massachusetts Institute of Technology and has taught at Oberlin College and served as its acting president. He has also been president of Franklin and Marshall College, Reed College, the Franklin Institute Science Museum in Philadelphia, and the Los Angeles County Museum of Natural History. Presidents Ronald Reagan and George H. W. Bush both appointed Powell to the National Science Board. He is the author of a number of books including *Dead Pool: Lake Powell*, *Global Warming and the Future of Water in the West*, and *The Inquisition of Climate Science*.



James Lawrence Powell

Whose Fault Is It?

The Geology Behind Santa Barbara's Scenic Beauty

Field trip with Jan Dependahl

Saturday, October 1, 9:00 a.m. to about 5:00 p.m.

Participation is limited to 25

Advance registration required at synature@west.net or 805 693-5683

Members free/non-members \$20

Do you ever look at Santa Barbara's beautiful mountains--or islands offshore--and wonder how they got there? Do you wonder why our coastline extends east-west and our ocean is in

the south? Join retired SBCC Geology instructor **Jan Dependahl** for an exciting geologic excursion through the Santa Barbara Coastal Plain to discover why. This day's adventure, recommended for ages 12 and up, will leave you understanding Santa Barbara's geologic history and setting, and you will have a fantastic time!

This driving trip will begin and end at Santa Barbara City College and will cover areas from the Santa Barbara Riviera to West Goleta.

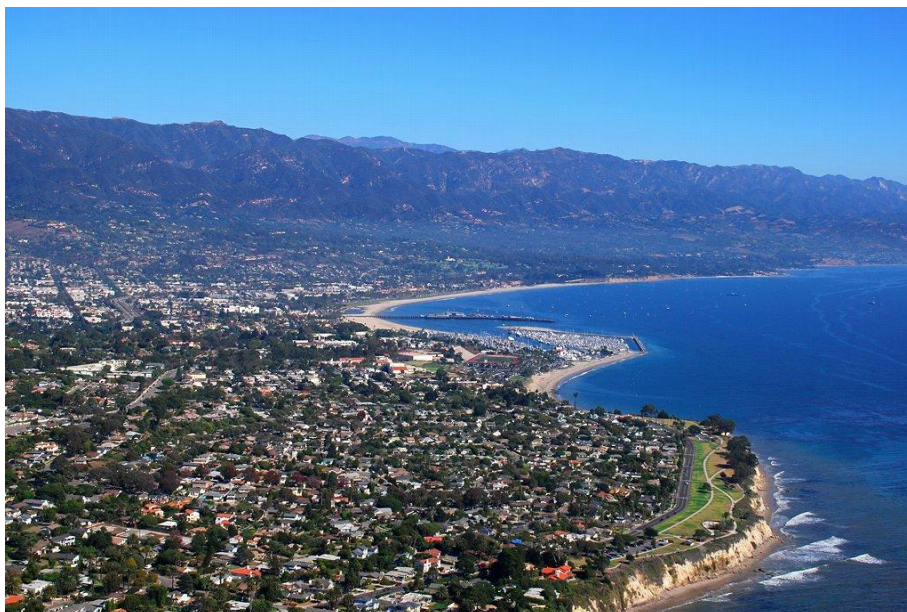


Photo © John Wiley

**King Sequoia: The Tree That Inspired a Nation,
Created Our National Park System, and
Changed the Way We Think about Nature**

Free lecture and book signing with William C. Tweed

Tuesday, October 11, 7:00 p.m.

Legion Wing, Veterans Memorial Hall

1745 Mission Dr., Solvang

Join us for a fascinating evening as one of California's preeminent naturalists unspools a history that echoes across generations and continents. Former park ranger William C. Tweed will take us on a tour of the Big Trees in a narrative that travels deep into the Sierras, around the West, and all the way to New Zealand. The ancient sequoias in California, which predated Christianity, were early tourist destinations. Since these trees towered over all others, they became the embodiment of the state's superlative, almost unbelievable appeal. When sequoias were threatened by logging interests, the feelings of horror evoked by this desecration catalyzed protection efforts; in a very direct way, this species inspired the national park idea. And sequoias' influence doesn't end there: as science evolved to consider landscapes more holistically, sequoias were once again at the heart of this attitudinal shift. Featuring an entrancing cast of adventurers, researchers, politicians, and



Photo © John Everts

environmentalists, King Sequoia reveals how one tree species has transformed Americans' connection to the natural world.

William C. Tweed brings humans closer to nature using the knowledge and skills he developed during thirty years as a chief naturalist, historian, and writer with the National Park Service. His published works include two books on Sequoia-Kings Canyon National Parks, and most recently *Death Valley and the Northern Mojave: A Visitor's Guide* (coauthored with Lauren Davis, Cachuma Press, 2003), and *Uncertain Path: A Search for the Future of National Parks* (University of California Press, 2010). Tweed makes his home in Bend, Oregon.

Wild Condors

Field trip to Hopper Mountain National Wildlife Refuge with Joseph Brandt

Saturday, October 15, 8:00 a.m. to 5:00 p.m.

Participation is limited 25

Advance registration required at synature@west.net or 805 693-5683

Members free/non-members free

This is a rare opportunity to watch our largest land birds soar above the deep canyons, steep ridgelines and rocky pinnacles of Hopper Mountain NWR. The 2,471 acre refuge adjoins the southern boundary of the Sespe Condor Sanctuary (53,000 acres), a component of the Los Padres National Forest. Here California condors can safely forage, build nests, and rear their young, with oversight and assistance from a team of biologists and volunteers dedicated to their preservation and welfare. We're fortunate to have **Joseph Brandt**, who heads up that team, guide us on this unique tour. In addition to animal wildlife, the refuge supports native oak woodlands, chaparral and coastal sage scrub, riparian areas, and some of the last remaining intact stands of California black walnut.



Photo © *The Condor's Shadow*, courtesy Good Eye Films

The trip begins promptly at 8:00 a.m. in the Fillmore area, includes driving and short walks over uneven steep ground, and returns to the Fillmore meeting area by 5:00 p.m. Dress in layers, bring lunch, water, sun protection, and binoculars. High clearance/4WD vehicles recommended.

Grizzly Bears, Biodiversity, and Fire in the Chaparral

Free lecture with Richard W. Halsey

Thursday, Oct. 27, 7:00 p.m.

Legion Wing, Veterans Memorial Hall

1745 Mission Dr., Solvang

Once home to the California grizzly bear, and where the last California condors were able to hold off extinction, the chaparral remains one of the most misunderstood and under-appreciated ecosystems on earth. Chaparral is found in every county in the state, supports a wild variety of animals and plants, and is being threatened by too many fires. Join this exciting exploration of the chaparral's unique natural history and discover why it represents such a vital link to nature for all Californians.

Richard W. Halsey is director of the [California Chaparral Institute](#), a non-profit, research and educational organization focusing on the ecology of California's chaparral ecosystem, the dynamics of wildland fire, and the promotion of nature education in a way that encourages communities to connect better with their surrounding



Photo courtesy [California Chaparral Institute](#)

natural environment. Mr. Halsey taught biology for over twenty years in both public and private schools and was honored as the Teacher of the Year for San Diego City Schools. The second edition of his book *Fire, Chaparral, and Survival in Southern California* was published in 2008. Mr. Halsey has also been trained as a Type II wildland firefighter.

TIME TO CHOOSE

Free documentary film screening

Saturday, November 5, 7:00 p.m.

Little Theater, Santa Ynez Valley Union High School

2975 East Highway 246, Santa Ynez, CA

Join us for a free screening of [TIME TO CHOOSE](#), a timely exploration of one of the biggest challenges facing humanity today. Academy Award® winning documentary filmmaker Charles Ferguson (*Inside Job*, *No End in Sight*) turns his lens to address worldwide climate change challenges and solutions in his new film.

Featuring narration by award-winning actor Oscar Isaac, *TIME TO CHOOSE* leaves audiences understanding not only what is wrong, but what can be done to fix this global threat. Ferguson explores the comprehensive scope of the climate change crisis and examines the power of solutions already available. Through interviews with world-renowned entrepreneurs, innovators, thought leaders and brave individuals living on the front lines of climate change, Ferguson takes an in-depth look at the remarkable people working to save our planet.

Film screening is in the Little Theater at Santa Ynez Valley Union High School.



Go Green!

Please consider receiving Magpie Calls by e-mail only. Just let us know by contacting us at synature@west.net, and we will add your name to our "e-mail only" list. Help the Society reduce paper usage and save on postage. A downloadable copy of the newsletter is also available on our website, www.synature.org/newsletters/.

Parasites and Food Webs in Our Local Estuaries

Free lecture with Kevin Lafferty

Saturday, November 19, 7:00 p.m.

Tipton Meeting House, UC Sedgwick Reserve

3566 Brinkerhoff Ave, Santa Ynez

Join us for an eye-opening talk about the hidden complexities of local aquatic ecosystems. California's tidal estuaries like the Carpinteria Salt Marsh contain trematode parasites with complex life cycles hosted by both birds and snails. Within the snails (rendered sterile by the parasite), the trematodes produce free-swimming stages that seek out a second intermediate host, such as California Killifish. Within the fish's brain, the parasites can manipulate its behavior, making the fish more susceptible to predation by birds. Once in the gut of a bird the parasites can complete their life cycle. These parasites are so common in estuaries that we can measure them by the kilogram. Ironically, the more biodiversity an estuary supports, the more parasites it can support, meaning that parasites can be positive indicators of ecosystem health.



Photo © Chuck Graham

Kevin Lafferty

Parasites affect ecosystems and, in turn, how ecosystems affect parasites. He also conducts research on conservation of marine resources, investigating strategies for protecting endangered shorebirds, fish and abalone, and has assessed how marine reserves affect ecosystems. Lafferty received a Ph.D. in Ecological Parasitology from UC Santa Barbara and took a postdoc with the National Marine Sanctuary and a research position at UCLA. He is currently a Marine Ecologist for the US Geological Survey at the Channel Islands Field Station, and a UCSB adjunct faculty member in the department of Ecology, Evolution and Marine Biology.

Birds and Restoration of Devereux Slough

Field trip with Dan Fontaine and Darwin Richardson

Saturday, December 3, 9:00 a.m. to 3:00 p.m.

Participation is limited to 25

Advance registration required at synature@west.net or 805 693-5683

Members free/non-members free

This trip will explore the Devereux Slough ecosystem, our westernmost large estuary on the south coast. Lower Devereux slough is part of the Coal Oil Point UC Reserve and is designated by the Audubon Society as an important bird area. We will see many of our region's winter shorebirds and other coastal species as we explore the beach, dunes, salt marsh and upper reaches of this diverse estuary with trip leader **Dan Fontaine**. Dan is an expert naturalist who has conducted avian field work with the Point Reyes Bird Observatory, the U.S. Fish and Wildlife Service and other organizations, and is executive director of the Wilderness Youth Project.

This trip also will explore the exciting restoration of the historic upper portion of Devereux Slough, planned to



Photo © Callie Bowdish

begin this fall. In the 1960's a golf course was built here by filling in the upper portion of the slough. The golf course is no longer active and the property is now owned by UCSB. **Darwin Richardson** will give us a tour describing plans to restore the upper extent of this estuary in what will be one of the largest restoration projects undertaken in our region. Darwin is a restoration ecologist with UCSB's Cheadle Center for Biodiversity and Ecological Restoration.

Birds and Tide Pools of Morro Bay and Montaña de Oro

Field trip with Joan Lentz and Larry Ballard

Sunday, December 11, 9:00 a.m. to 4:00 p.m.

Participation is limited to 25

Advance registration required at synature@west.net or 805 693-5683

Members free/non-members \$20

We'll spend the morning looking for birds in the rich avian habitats around the Morro Bay salt marsh, the pines by the campground, and the tidal areas near the Morro Bay Museum of Natural History. After lunch we'll drive to Montaña de Oro State Park and hike a short distance through dune habitat to Hazard's Reef to examine the prolific life in the tide pools. With luck we'll see Black Oystercatchers and find the foot-long Gumboot Chiton, largest in the world.

Joan Lentz is an author, teacher, and research associate at the Santa Barbara Museum of Natural History. For over 35 years, she has been a serious student of the natural history of the Santa Barbara region, concentrating on its bird life. Lentz has written three books, including *A Naturalist's Guide to the Santa Barbara Region* and *Introduction to Birds of the Southern California Coast*. **Larry Ballard** has an interest in all aspects of the region's natural history, and has led many natural history trips for our organization as well as for other groups and institutions in Santa Barbara County.



Photo © Stuart Wilson

We'll meet at the marina opposite the entrance to the Morro Bay State Park campground at 8:45 a.m. for registration; the field trip begins promptly at 9:00 a.m. Bring lunch, water, sun protection, and dress in layers for weather that could be windy and/or cold. The trail to the tidepools is not long, but may be slippery, muddy and/or steep, and the beach may be rocky and uneven. Bring hiking poles if you wish, and footwear appropriate for wet, rocky scrambling.

MONARDELLAS OF OUR COASTAL DUNES

By Larry Ballard

On the matter of arguelloensis, I have seen it in a number of places near Pt. Arguello on Vandenberg, and from the first time I saw it to present day, it has always been distinct to me and quite different from the former subspecies in morphology, much less ecological distribution. Its woodiness alone, plus erect stems and deep violet color are distinctive.

—Dieter Wilken, Santa Barbara Botanic Garden

The restriction of plants to a certain soil or geologic substrate is a major factor contributing to California's floral diversity. We've seen good examples of this on recent Natural History Society field trips: Leather Oak on serpentine near Ranger Peak, Round-leaved Filaree on clay at Sedgwick Reserve, Kennedy

Buckwheat on granite at Mt. Pinos, and Torrey Pine on sandstone at Santa Rosa Island. Last spring, during our field trip to the Guadalupe-Nipomo Dunes complex northwest of Santa Maria, we also saw an example of a plant in the genus *Monardella* that is restricted to a certain soil type and which may be evolving into an entirely new species.

The genus *Monardella* is a member of the mint family, and it comprises 30 annual or perennial species in California. All are noted for their exceptionally aromatic foliage. Four local taxa of *Monardella* within our region display remarkable fidelity to coastal sands that have different origins and geologic ages.

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Dune Mint (*M. undulata*) is a perennial with three subspecies differing in growth form, density of hairs, shape of the leaves and size of the flower clusters. The three subspecies have an archipelago-like distribution extending from Pismo Beach south to Point Arguello.

The first subspecies is San Luis Obispo Monardella (subsp. *undulata*), found only in its namesake county from Pismo Beach south to the Santa Maria River where it grows on stabilized aeolian dunes deposited about 2000 to 6000 years ago.

The second is Crisp Monardella (subsp. *crispa*), found from Pismo Beach to several miles south of Surf Beach on active aeolian dunes dating from about 2000 years ago to the present day. The two subspecies were previously considered to be distinct species that hybridized where active dunes overlapped stabilized dunes.

The third and southernmost subspecies is Arguello Monardella (subsp. *arguelloensis*), found only in the vicinity of Point Arguello and just south of the Aeolian dune system. Instead of growing on sand blown in from the beach, it grows on sands mapped by Tom Dibblee as floodplain (Holocene) and alluvial fan deposits (Pleistocene) that have washed down from the adjacent western terminus of the Santa Ynez Mountains. The sands here are likely a mix of eroded shale and volcanic rock. The distribution of Arguello Monardella doesn't overlap with the other subspecies, and it also has a slightly later and shorter flowering period. This plant is



Monardella undulata subsp. arguelloensis
Photo © CNPS, San Luis Obispo Chapter
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morphologically distinct, geographically isolated and found on a highly localized substrate, which suggests that subsp. *arguelloensis* may warrant elevation to species status and deserve state and federal protection due to its highly localized range.

The fourth local taxa is Curly-leaved Monardella (*M. sinuata*), an annual species that is probably a sister species to the perennial Dune Mint. Its range doesn't overlap with Dune Mint as it grows farther inland on sand deposits of different origins and ages, as on Orcutt sand (Pleistocene) at La Purisima Mission and marine Careaga sands (Pliocene) near Ballard Canyon some 30 miles from the coast. Curly-leaved Monardella looks very similar to San Luis Obispo Monardella and is likely closely related, but it's not known which came first. In genera with both annual and perennial species a perennial is often derived from an annual, especially when there is an ecological shift to coastal maritime or island-like habitats.

This highly localized complex of Monardella has befuddled botanists since it was first described in 1834. A molecular assessment of our local species, or preferably the entire genus, may shed some light on the evolutionary history, relationships and substrate preferences of these taxonomically frustrating yet wonderfully fragrant plants.



Monardella undulata subsp. crispa
Photo © John Evarts

Marc's Stumper

Fire on the mountain! We breathe the smoke and dust the ashes from our cars whenever the wind blows from the east. All this is coming from the 30,000+ acre Rey Fire burning in the far upper canyons of the Santa Ynez River. Maybe this fire was started by a tree falling across a power line, but there have always been lightning strikes and summer-dry chaparral ready to burn. The fire bombers and hotshot crews are something new. What controlled wildland fires *before* we got these modern procedures? Did the whole state burn at once until the winter rains finally came?

About last issue's stumper: Our roadsides are a disturbed habitat that is attractive for weeds and some native wildflowers that are adapted to follow fire and flood. Roads collect rainwater and let the sunlight in, like a jungle river. Road cuts create seeps and rocky slopes that some native plants prefer. Caltrans tends our scenic roads, and the cattle are on the other side of the fence. Roads are also avenues for the spread of invasive weeds. It's nice to see lupines and poppies along the highway, but you'll find a lot more natural diversity in a remote place like Figueroa Mountain!

Here are two shots of air tankers fighting the recent Rey Fire in the upper Santa Ynez Valley. The plane on the left is a military C-130 Hercules cargo plane, and the one on the right is "Tanker 910", a converted DC-10 wide-body jetliner. But what put an end to wildfires before these modern methods? Photos by Marc Kummel.



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