



# CALIFORNIA BOTANY FOR WILDLIFERS



**SEDGWICK UC RESERVE,  
SANTA BARBARA CO., CA**

**MAY 1-4, 2019**

**Western Section of  
The Wildlife Society**

## Instructors

### **Dr. David Keil**

Emeritus Professor

Emeritus Director, Robert F. Hoover Herbarium

Curator of Vascular Plants

California Polytechnic University, San Luis Obispo

### **Randi McCormick**

Principal Biologist and Founder,  
McCormick Biological, Inc.

### **LynneDee Althouse**

Principal Scientist,  
Althouse & Meade Biological & Environmental Sciences

### **Dr. Tara Schoenwetter**

Senior Biologist/ Ecologist, Leidos  
Conservation Affairs Coordinator Central Coast Chapter

### **Dr. Jan Timbrook**

Curator of Ethnography  
Santa Barbara Museum of Natural History

**Description:** Through lecture and field outings, our goal is to equip the wildlife biologist with a more comprehensive understanding of their own field by exploring the basics of botany. We will practice habitat mapping, discuss the ins and outs of regulation, and explore resources available to biologists interested in plants. You'll get a crash course in invasive species, terms to describe plants you don't know, and leave with an appreciation of how plants can enrich wildlife surveys.

**Workshop Registration includes** one participant spot for the class, handouts, and all meals. We will travel to field sites using participant vehicles. Lodging can be provided for an additional fee ([see below](#)).

**This workshop is aimed towards** consultants, researchers, and agency biologists with little to moderate understanding of botany. Information will be most applicable within the [California Floristic Province](#), but the skills obtained can be used anywhere in California, Nevada, Oregon, or Baja.

You do not need to have prior coursework in botany, but knowledge of ecology and habitats is recommended.

## Will I Become a Botanist?

If you're serious about getting into botany, this workshop should be viewed as a gateway to deciding what aspect you want to pursue. We do not believe one workshop, or even several, are enough to crack the surface of this field. A semester course or equivalent and/or years of practice are necessary before one should feel comfortable conducting a rare plant survey, for example.

### What about plant identification?

We believe that plant identification requires a dedicated course. In addition to ours, consider taking one (or several) of the dedicated plant identification courses put on by:

- UC Jepson Herbarium [workshop program](#).
- California Native Plant Society [workshop program](#).

For more a more advanced workshop, focusing on survey protocols, consider [this CNPS event](#).

**Coordinator/Contact for Questions:** Ivan Parr, [workshops@twc-west.org](mailto:workshops@twc-west.org)





## Registration

All registrants complete the secure online form at:

[https://www.wildlifeprofessional.org/western/botany2019\\_reg.php](https://www.wildlifeprofessional.org/western/botany2019_reg.php)

**The cutoff date for early registration is April 1, 2019. Registration is payable by credit card.**

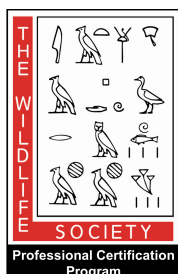
Instructions for check payments are included as part of the online registration process.

There will be a maximum enrollment of participants, after which a wait list will be kept. A minimum of 19 participants must register for the identification course by **April 21** or the workshop will be cancelled and all registration fees will be returned.

| Registration Categories                                                                            | Full Course (May 1-4, 2019) |                            |
|----------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|
|                                                                                                    | Early Reg<br>(by 4/1/19)    | Late Reg<br>(after 4/1/19) |
| Member, TWS Western Section or CCCC Chapter                                                        | \$495                       | \$540                      |
| Non-Member                                                                                         | \$545                       | \$595                      |
| Student/Early Career professional* (1 spot)                                                        | \$395                       | \$440                      |
|                                                                                                    | Lodging at Sedgwick Reserve |                            |
| Tent cabins<br>(4 people per cabin, 16 total)                                                      | \$85                        | \$95                       |
| Campers<br>(bring your own tent)                                                                   | \$45                        | \$55                       |
| *Must show proof of current registration at an accredited university, or graduation within 1 year. |                             |                            |

**If the workshop must be rescheduled**, we will offer transfer registrations to the alternate dates in the priority that registrations were initially received.

**Cancellation and Refund Policy** can be found at the [registration page](#). The last day for a refunded registration is April 17.



### Certified Wildlife Biologist Renewal/Professional Development Certificate Program

The Wildlife Society will allow a maximum of 20 Continuing Education Units in Category I of the Certified Wildlife Biologist Renewal/Professional Development Certificate

Program.

## Room and Board

### Meals

Breakfast and dinner will be catered by [Catalyst Creations](#). Fixings will be provided for participants to make their own care packs for lunch. Please communicate special needs/preferences with advanced notification through your registration.

### Lodging

Lodging at Sedgwick Reserve can be additionally purchased with registration. Within the registration page, you can choose between **bringing your own tent and camping** on the Sedgwick Grounds or sleeping in a rustic **tent cabin**.

**Tent cabins** consist of four vinyl tent cabins each have 4 single beds, which can accommodate 16 people. There is no electricity in the cabins so headlamps and warm sleeping bags are encouraged.



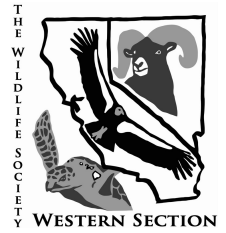
Ample Areas to Pitch a Tent



Interior of the Tent Cabins

### Facilities

Facilities at Sedgwick include compost toilets, a 2-stall shower house with 2 flush toilets, a firepit, large BBQ, indoor/outdoor seating and an outdoor kitchen. The classroom has electricity, but do not expect the ability to get cell service and wifi.



## Outside Lodging

If you choose to stay off-site, lodging can be found within 10 miles in Santa Ynez, Buelton, and Solvang. A list of affordable hotels can be found [here](#). Solvang, a Danish-themed town, has unbeatable atmosphere. However, as we'll be spending most of our time at Sedgwick, you may want to consider staying an extra night to enjoy it. Meals are included in the registration, as restaurants local to this area frequently have nonsensical hours during the week.

**Note:** From this list, I would not recommend staying in Lompoc, Goleta, or Santa Maria, which are over 20 miles away. Please inform the workshop coordinator of your lodging plans when you register!

## Transportation

Transportation throughout Sedgwick will rely on participants carpooling in their own vehicles. You will not need 4WD to get into Sedgwick, but some field outings *will require* 4WD. Therefore, please inform us if you are willing to bring a 4WD vehicle and how many people you can hold. Contact information will be provided to participants prior to the workshop if you'd like to carpool to the workshop.

**Flights:** If you are flying into Santa Barbara, please make sure you give yourself enough time to pack up, clean up, and experience traffic en route on the final day. I would budget a couple hours in addition to the given travel distance (45 minutes) as a general rule. If you are flying out of Los Angeles, consider booking your flight for the following day.

# Location



**Sedgwick Reserve** is a 6,000-acre research, conservation and education facility located in the Santa Ynez Valley, roughly an hour northwest of Santa Barbara. It is one of seven reserves managed by the University of California Santa Barbara Natural Reserve System, and one of 39 within the UC system. Sedgwick one of most expansive and species-rich research facilities on the continent, and is the only UC Reserves with a telescope.

Encompassing two entire watersheds, its habitats comprise of diverse grassland, chaparral, oak woodland, and freshwater

marshland. It is rich in both archeological and [natural resources](#). In addition to an abundance of plant life, Sedgwick is notable as a hotspot for rattlesnakes, mountain lions, and mesocarnivores.

The Reserve is generally closed except for use by researchers, administrators, and stewards.

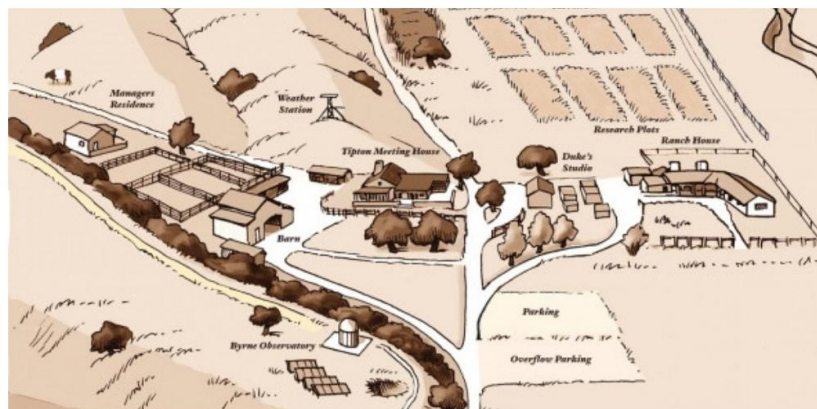
**Address:** [3566 Brinkerhoff Ave, Santa Ynez, CA 93460](#)



**Rules:** Sedgwick Reserve has a handful of easy rules for us to remember. Smoking, hunting, collecting, mountain bikes, ATV's, and offroading are prohibited. Please see regulations [here](#).

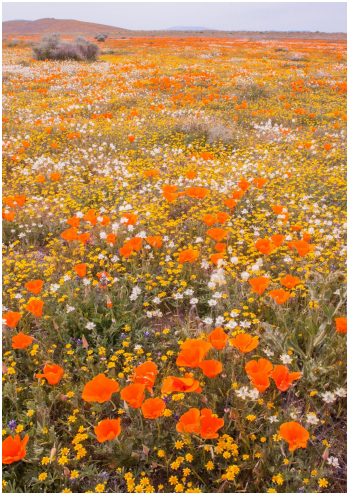
**Directions:** From Highway 154, turn east on Edison Road (at the 4-way flashing stop sign at the big blue church). Drive 1 mile on Edison and turn right on Roblar. Drive 1.5 miles on Roblar and turn north on Brinkerhoff. The Reserve is at the end of the road (3566 Brinkerhoff). Please drive slowly on Brinkerhoff - neighbors and wildlife appreciate the posted 25 mph speed limit. Follow the signs into the field station from the main gate.

For specific directions, please see [this map](#).



# Workshop Schedule

(Subject to Change Per Instructors)



## Wednesday, May 1 - INTRODUCTION to CALIFORNIA BOTANY

- 10:00 - 12:00 Setup
- 1:00 - 2:00 Registration and Check-in
- 2:00 - 2:45 Introductions/Ice Breaker ([Ivan](#))
- 2:45 - 3:00 Introduction to Location/Staff ([Kate McCurdy](#), Sedgwick Reserve Manager)
- 3:00 - 3:45 25 Myths of About Botany ([Ivan](#), [Randi](#))
- 3:45 - 4:00 Break
- 4:00 - 5:00 An Overview of the California Floristic Province: Diversity and Difficulty ([David](#))
- 5:00 - 6:00 Evening Hike ([David](#))
  - Collect specimens
- 6:00 - 7:00 Dinner
- 7:00 - 8:00 Creating and Keeping Track of Voucher Specimens ([David Keil](#))

## Thursday, May 2 - GETTING TO KNOW PLANTS

- 7:00-7:30 BREAKFAST
- 7:30 - 7:15 Morning Announcements ([Ivan](#))
- 8:15 - 10:00 Basics of Plant ID ([David](#))
  - Terms used to describe plants
- 10:00 - 10:15 BREAK
- 10:15 - 11:30 Invasive Plants ([David](#))
- 11:30 - 1:00 Hike ([David](#))
  - Invasives
  - Rare Plants
- 1:00 - 2:00 Lunch
- 2:00 - 2:30 Book, Digital and Professional Resources that are Essential to Botanists ([David](#))
- 2:30 - 3:30 Pollinators
- 3:30 - 3:45 Break
- 3:45 - 4:15 Restoration Considerations: Introduction and Interior ([Randi](#))
- 4:15 - 5:00 Restoration Considerations: Coastal ([LynneDee](#))

Optional: Evening Keying Session

## Friday, May 3 - REGULATION & RARE PLANTS

- 7:00 - 7:45 Breakfast
- 7:45 - 8:00 Morning Announcement
- 8:00 - 8:30 Lichens & Mosses ([Tara](#))
- 8:30 - 10:00 Local Plants Hike ([David](#))
- 10:00 - 10:15 Break
- 10:15 - 10:45 Plants and Plant Communities under CEQA and NEPA ([LynneDee Althouse](#))



10:45 - 11:00 The Role of CNPS ([Amy Patten](#))

- CNPS Rare Plant Ranking

11:00 - 12:15 Planning a Rare Plant Protocol Level Survey ([Randi](#), [LynneDee Althouse](#))

- Seasonality
- Reference Population Surveys
- Rainfall and annual fluctuation
- Rare Plant Resources
- How to look, where to look, what to look for

12:15 - 1:15 Lunch

1:15 - 3:00 Hike - CNPS Rare Plant Treasure Hunt with CNPS ([Amy Patten](#))

3:00 - 3:15 Break

3:15 - 3:30 The Importance of Plants to Wildlife Diversity ([Tara](#))

3:30 - 4:00 Important Plants in Protocol-Level Wildlife Surveys

4:00 - 5:00 Plants Important to Native Peoples ([Jan Timbrook](#))

6:15 - 7:15 Dinner

Optional: Keying Session

## **Saturday, May 4 - PLANT COMMUNITIES**

7:00 - 8:00 BREAKFAST

8:00 - 8:15 Morning Announcements ([Ivan](#))

8:15 - 8:30 Sensitive Communities ([Tara](#))

8:30 - 9:30 CWHR and MCV2 ([Tara](#))

9:30 - 9:45 Break

9:45 - 10:15 Edaphic Plant Indicators (Habitats/Soil Types) ([David](#))

10:15 - 10:45 Fire Ecology ([David](#))

10:45 - 11:15 CNPS Rapid Assessment ([LynneDee](#))

11:15 - 11:45 Break and Pack to-go Lunch

11:45 - 1:30 Final Hike ([David](#), [Randi](#), [Tara](#), [Ivan](#))

- Rapid Assessment
- Lichens & Mosses

1:30 - 2:00 Wrap-up, Clean Up, Evaluations



# Instructor Biographies

## Lead Instructor - Dr. David Keil



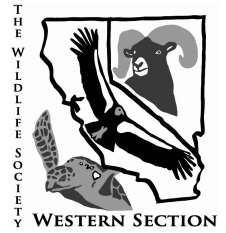
**Dr. David Keil** is recognized as one of California's most accomplished contemporary botanists. One of six editors of California's bible on floristic identification, The Jepson Manual, Dr. Keil had the monumental job of authoring the Asteraceae, California's most diverse and complex family. Currently, Dr. Keil is completing the Flora of San Luis Obispo County. Professor emeritus at Cal Poly, Dr. Keil has taught many courses on general botany, taxonomy, evolution, plant biogeography, and of course, field botany.

A lifelong educator, Dr. Keil has authored study guides and textbooks in addition to his numerous scientific publications, which range from chromosome counts to assigning lectotypes. Dr. Keil has described new species from Arizona, California, Florida, Nevada, South America, Mexico, the West Indies, and Panama. Among the taxa he's named from California, you may know of the rare Allen's daisy ([\*Pentachaeta aurea ssp. allenii\*](#)) and Diablo Canyon bluegrass ([\*Poa diabolii\*](#)). In return, Dr. Keil has two California plants named after him - the Santa Ynez groundstar ([\*Ancistrocarphus keilii\*](#)) and the Keil's daisy ([\*Erigeron inornatus var. keilii\*](#)).

As emeritus director and curator of the Robert F. Hoover Herbarium, Dr. Keil was responsible for over 70,000 vascular plant specimens, 2,500 algal specimens, thousands of other specimens associated with ongoing research - one of the larger repositories of botanical specimens and literature in the state.

At the state level, Dr. Keil served on the Rare Plant Scientific Advisory Committee from 1998 through 2001. Since 2009, he has served as a member Editorial Advisory Board of the *Fremontia*, the California Native Plant Society's publication. In 2018, Keil was honored as a Fellow of the California Native Plant Society.

Dr. Keil received his B.S. and M.S. from Arizona State; and his Ph.D from Ohio State University.



## LynneDee Althouse

**LynneDee Althouse** is a consulting biologist, restoration ecologist, botanist, soil scientist, and Clean Water Act specialist with extensive experience, having conducted hundreds of surveys and restoration projects in Santa Barbara, San Luis Obispo, Kern, Monterey, San Joaquin, Kings, and Ventura Counties. She especially enjoys rangeland, coastal sage, and oak woodland habitat restoration.

Ms. Althouse is an expert botanist and a soil scientist with a strong background in watershed ecology. She has extensive experience regarding the flora of central and coastal California, including the Carrizo Plain and Sedgwick Reserve itself, where she conducted a study on nitrogen movement in oak woodland. She has been a lecturer in conservation planning at UC Santa Barbara, and has taught natural history and soil science at Cal Poly San Luis Obispo. She has trained many students and employees to become environmental professionals, including conservation planners and restoration ecologists.

## Randi McCormick

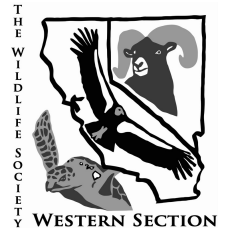


Randi McCormick is the principal biologist and founder of McCormick Biological, Inc (MBI). MBI is a biological consulting firm based out of Bakersfield, CA which specializes in biological resources services, particularly in relation to endangered species of the San Joaquin Valley with clients ranging from oil and gas production to alternative energy.

In 30 years of experience as a biological consultant, Ms. McCormick has distinguished herself as a mentor and educator of both her staff, as well as her clients. In her free time, she teaches and volunteers on workshops, and also mentors students from local colleges. Ms. McCormick is an active member of the San Joaquin Chapter and sits on the board of the Western Section of The Wildlife Society. Having a strong belief in learning for life and giving back to the community, Ms. McCormick, through MBI, has sponsored programs within Wind Wolves Preserve, Tejon Ranch Conservancy, Center for Natural Lands Management, and California Living Museum.

In the field of wildlife, Ms. McCormick's specialties include blunt-nosed leopard lizard, sensitive small mammals, and San Joaquin kit fox, but she is also an advocate for plant conservation and believes in the idea that wildlife biologists should know their plants.

A woman of many hats, Ms. McCormick studied engineering and geology at Texas A&M University before receiving her B.S. in Biology from CSU Bakersfield in 1990. She is in the running for President-Elect for the Western Section!



## Dr. Tara Schoenwetter



**Dr. Schoenwetter** is a senior ecologist/biologist for Leidos, where she focuses on the assessment and management of sensitive environments, species and habitat modeling, natural resources permitting, project management and consultation, mainly on federal and state installations. Dr. Schoenwetter has extensive field experience that ranges from general wildlife (terrestrial and marine) and botanical (including bryophytes and ethnobotanical) surveys to more focused surveys including wetland delineations, habitat/vegetation mapping, California Rapid Assessments; as well as monitoring and protocol surveys for sensitive species protection and habitat recovery.

Dr. Schoenwetter has lived and worked abroad, and has spent a substantial amount of time in east Africa (Kenya, Tanzania), Madagascar, and New Zealand, where she completed her dissertation on epiphytic lichen communities. For Leidos, she has worked in the eastern and western United States (U.S.), pacific islands and internationally. Dr. Schoenwetter provides biological support for HCP's, Integrated Natural Resource Management Plans, EIR's and Reviews, Biological and Environmental Assessments, Species and Climatic Modeling as well as many other documents and research projects addressing sensitive species. Dr. Schoenwetter was recently appointed the conservation affairs coordinator for the Wildlife Society Central Coast Chapter.

## Dr. Jan Timbrook



Jan Timbrook, Ph.D., is an anthropologist and ethnobiologist -- one who studies the interactions of human societies with plants and animals. Her specialty is the indigenous Chumash people of the Santa Barbara region, particularly their uses of plants in food, medicine and basketry. Having joined the staff of the Anthropology Department at the Santa Barbara Museum of Natural History in 1974, she is one of the top experts in Chumash studies. Her degrees are in Anthropology from University of California, Santa Barbara.

She has collaborated on four published books - including studies of traditional history and ritual and the Chumash plank canoe - and authored many scientific papers on topics ranging from herbal medicine to environmental management by the Chumash. Her book, *Chumash Ethnobotany*, based on nearly three decades of research, was published in 2007.

At the Museum, Jan is Curator of Ethnography-- that means she's the person people call when they want a basket or textile identified, need advice on how to care for it, or wonder how to translate a word into Chumash. She also takes care of the Museum's collection of cultural materials from western North American Indian tribes, helps prepare exhibits, and does illustrations of scenes from Chumash life.

Jan's work extends beyond the Museum. She is past president of the Society of Ethnobiology, an international organization. For several years, the California Indian Basketweavers Association has

entrusted her to produce exhibits of baskets by contemporary Native weavers. And she has also shared her knowledge by giving hundreds of lectures and talks for groups throughout the community.

## Ivan Parr

**Ivan Parr** splits his time between two nearly full-time jobs: as a biological consultant and as the workshop coordinator for the Western Section of The Wildlife Society. Mr. Parr considers himself both a wildlife biologist and a botanist, feeling that there should not be a social, political, or ecological barrier between the two sciences. He has been looking forward to this workshop ever since he took on the role of Workshop Coordinator.

Having had many dedicated mentors in his past, Mr. Parr feels strongly about supporting students and early career professionals. He previously served as Student Affairs chair to the San Francisco Bay Area Chapter of The Wildlife Society, and has been part of numerous other student-based events. In his free time, he enjoys photography, hiking, and exploring the natural wonders of California and beyond.



**Wildnote** is honored to be a sponsor of Western Section Workshops.

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