

Botanizing the Basin: Exploring Mono Lake's Diverse Flora

July 17–19, 2026 • Steve Root



Purshia tridentata / Antelope Bitterbrush (Rosaceae), a common shrub of the Mono Basin
Photo by Steve Root

**\$310 per person/ \$295 for Mono Lake Committee members
enrollment limited to 15 participants**

The Mono Basin supports an exceptional diversity of plant communities shaped by extreme soils, strong elevation gradients, and a dynamic history of fire, volcanism, and hydrologic change. Alkaline shorelines, sagebrush steppe, riparian corridors, young volcanic substrates, and montane forests occur in close proximity, creating sharp ecological contrasts over short distances. The plants that occupy these landscapes reflect both long-term environmental constraints and ongoing natural processes, offering a clear lens through which to understand how place influences biological diversity.

This field seminar will focus on learning to read the landscape through its plants. Participants will visit several easily accessible sites each day, where they will practice plant identification using observable traits, simple keys, and pattern recognition rather than memorization alone.

Each stop will feature several focal species to anchor discussion, along with guided identification exercises, and time for open botanizing. Emphasis will be placed on understanding why plants grow where they do, building confidence with field identification, and developing practical skills that participants can apply beyond the Mono Basin.

Steve Root is a field ecologist and naturalist based in the Eastern Sierra, where his work focuses on understanding ecological patterns through holistic observation and field-based research. He has conducted extensive fieldwork in the Mono Basin and Yosemite region, with experience spanning botany, wildlife ecology, and natural history interpretation. Steve brings a practical, inquiry-driven approach to teaching in the field, emphasizing focused observation, ecological context, and helping participants develop the tools to explore landscapes thoughtfully and independently. He has an M.S. in Plant Biology from the University of Vermont's Field Naturalist Program.

ITINERARY (subject to change depending on conditions)

Friday, July 17 at 7:00pm: Meet in the gallery at the Mono Lake Committee Information Center & Bookstore in Lee Vining (51365 Highway 395). After introductions, we will review basic plant identification concepts and the major plant communities of the Mono Basin, along with the forces that have shaped those communities over time. We will discuss how botanists approach identification in the field and preview the locations we will visit over the weekend.

Saturday, July 18 at 8:30am: Meet at the Mono Lake Committee Information Center & Bookstore. Our first stop will explore plant life adapted to the extreme chemistry of Mono Lake's shoreline. We will focus on salt- and alkali-tolerant species, discussing the physiological strategies that allow plants to survive in these harsh soil conditions. A guided keying exercise will emphasize growth form, leaf traits, and family-level identification.

Later in the day, we will visit a nearby riparian area to contrast saline soils with freshwater-rich habitats. Here we will examine how plants are influenced by groundwater and seasonal flooding, get more practice with plant identification, and discuss how water availability structures plant communities. There will be time set aside throughout the day for personal exploration, nature journaling, and group discussions. The day will end around 4:00pm.

Sunday, July 19 at 8:30am: Meet at the Mono Lake Committee Information Center & Bookstore. We will begin the day in young volcanic landscapes of the Mono Basin, where sparse soils and recent geologic history shape plant distribution. We'll use several focal plant species to anchor discussions of ecological succession, soil development, and plant adaptations to drought and nutrient-poor substrates. Participants will practice keying herbaceous plants using floral structure and inflorescence traits.

Finally, we will move into a mid-elevation montane setting to explore how plant communities change with elevation and disturbance. Time will be set aside for participant-led botanizing,

questions, and synthesis of themes from the weekend. The day will end around 2:00pm to allow time for travel.

ACTIVITY LEVEL:

This seminar's activity level: *moderate*. We will be walking up to two miles at a leisurely pace, much of which will be over uneven terrain, occasionally off trail, and will include stepping up and over obstacles. This type of walking requires good balance, some agility, and stamina. We will be gaining and losing altitude throughout the day (site dependent). Please reach out to fieldseminars@monolake.org if you have questions or to share accessibility needs.

WEATHER & ALTITUDE

Temperatures in summer will be hot during the day and cool at night, with possible windy conditions and afternoon thunderstorms. Average temperatures in July in Lee Vining are 85°F (max) and 54°F (min). Please check the weather as the seminar approaches and pack appropriately!

This seminar will take place at elevations ranging from about 6,000 to 10,000 feet above sea level. It is a good idea to acclimate at the elevation of Lee Vining for at least 24 hours prior to the start of the seminar. Those with a history of heart, ear, or respiratory problems should consult their doctors before attending. Anyone restricted to lower elevations should not enroll.

Remember to bring (and drink!) lots of water because your body loses more water at the higher altitudes of the Mono Basin. Begin drinking extra water as you drive to higher elevation in order to prevent dehydration and headaches. Also, the sun is intense at high elevations, capable of burning even on cool and cloudy days, so be sure to protect yourself thoroughly using sunscreen, sunglasses, and hat.

MEALS

Please bring a lunch already packed in the morning each day, plus plenty of water and snacks.

TO BRING

- warm clothing/layers
- daypack
- plenty of water
- boots or supportive shoes
- field notebook
- long pants (due to brush)
- raincoat, just in case
- hat, sunscreen, and sunglasses
- hand lens (10x magnification / strongly recommended)
- metric pocket ruler with 1mm graduations

RECOMMENDED READING

- *Jepson Manual: Vascular Plants of California* (2nd edition) – University of California Press
– If we are able to procure enough copies of the Jepson Manual we will do keying exercises in smaller groups in the field, allowing all of us to key more plants. Please bring a copy of the Jepson Manual if you have access to one – no need to purchase one if you do not have access.
- *Botany in a Day: The Patterns Method of Plant Identification* by Thomas J. Elpel
- *Sierra East: Edge of the Great Basin* – University of California Press
- *Sagebrush Country A Wildflower Sanctuary* by Ronald J. Taylor (1992)
- *Flowering Plants of the Sierra Nevada* by Joanna Clines and Stephen Sharnoff (2025)



Mono Lake Committee Field Seminars

P.O. Box 29 • Lee Vining, CA 93541 • (760) 647-6595 • monolake.org/seminars