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**From:** Styles, Alicia  
**Sent:** 2017-12-11T13:30:41-05:00  
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**Subject:** Fwd: Desert Institute at Joshua Tree National Park announces Spring 2018 classes  
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[sp2018 color catalog.pdf](#)

FYI...

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----- Forwarded message -----

From: **Kevin Wong** <[kevinwong@joshuatree.org](mailto:kevinwong@joshuatree.org)>  
Date: Fri, Dec 8, 2017 at 2:25 PM  
Subject: Desert Institute at Joshua Tree National Park announces Spring 2018 classes  
To: [desertinstitute@joshuatree.org](mailto:desertinstitute@joshuatree.org)

Good afternoon

The **Desert Institute at Joshua Tree National Park** announces the new schedule of classes for Spring 2018. The Desert Institute provides educational programming in Natural Sciences, Cultural History, "How-To" classes, Guided Hikes with a Naturalist, Fine Art classes and programs for women.

Darrell Shade will be teaching the annual class **Wildflower Wanderings** on March 3 and again on April 7

Attached is a pdf of the Spring 2018 catalog for your review.

Thank you,

Kevin Wong

Program Coordinator, Desert Institute

Joshua Tree National Park Association

760-367-5539

[www.joshuatree.org](http://www.joshuatree.org)

# Desert Institute

*at Joshua Tree National Park*

**Course Catalog Spring 2018**

DOI-2020-05 03245



# Welcome to Desert Institute *at Joshua Tree National Park*

It is hard to believe that it was almost 20 years ago that the Joshua Tree National Park Association began a unique experiment to find a way to connect people who were passionate about their park with some of the finest educators in the Southland. The Desert Institute was born to provide the in-depth knowledge that so many of our annual visitors and local residents were clamoring for: day-long classes that go beyond the basics and really immerse the learners in the natural and cultural history that make Joshua Tree such a special place. I remember working here as a journeymen ranger when the first classes were offered back in 1998. That first year, we offered five weekend classes on natural history. Who would have dreamed that twenty years later we would be offering dozens of courses that span the spectrum from desert cooking to smart phone photography to bighorn sheep habitat? One of the exciting new offerings is the Joshua Tree Master Naturalist certificate program. Students who take classes for college credit can also be enrolled in a certification program that is invaluable for educators, naturalists, and guides.









What will the next 20 years bring? With your help and feedback, I'm looking forward to this program evolving to continue to meet the changing needs and passions of all of us who are excited to learn about the incredible place we have chosen to call home. Good hiking and good learning in the New Year!

David Smith  
Superintendent, Joshua Tree National Park





## Spring 2018 Calendar

February 16 - 18	Rocks and Minerals of Joshua Tree National Park*	pg. 7
February 17	<b>NEW!</b> Summit Monument Peak	pg. 13
February 18	Rock Art of Southern California	pg. 12
February 18	Explore the Wonderland of Rocks	pg. 13
February 24	Explore Ruby Lee Mill	pg. 13
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March 3	Geology of Amboy Crater	pg. 7
March 3	Wildflower Wanderings	pg. 7
March 3	Joshua Tree Through the Lens	pg. 15
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March 9 - 11	Flora of Joshua Tree National Park*	pg. 8
March 10	Intaglios Along the Colorado River	pg. 12
March 10 - 11	Desert Invertebrates: A Macro Photography and Microscopy Primer*	pg. 7
March 10 - 11	<b>NEW!</b> Springtime Camping in Joshua Tree National Park 	pg. 18
March 17	Desert Tortoise Conservation Biology*	pg. 8
March 17	<b>NEW!</b> Capturing Joshua Tree Landscapes with Acrylics	pg. 15
March 17 - 18	Biological Soil Crusts of Joshua Tree National Park*	pg. 8
March 18	Native American Plant Uses	pg. 12
March 18	Explore the Coxcomb Inner Basin	pg. 13
March 23 - 25	Fine Art Photography in Joshua Tree National Park 	pg. 15
March 24 - 25	Ecology of Joshua Tree National Park*	pg. 9
March 31	<b>NEW!</b> Route 66 Photography Workshop	pg. 16
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April 7	Wildflower Wanderings	pg. 7
April 7	Hike to Desert Queen Mine	pg. 13
April 7 - 8	"How-To" Navigate with Map and Compass	pg. 5
April 7 - 8	Geology of the Mojave National Preserve 	pg. 9
April 14	"How-To" Survive in the Desert	pg. 5
April 21	<b>NEW!</b> Salton Sea Photography Workshop	pg. 16
April 21	<b>NEW!</b> Geology of the Marble Mountains	pg. 9
April 21	<b>NEW!</b> National Parks At Night Photography Workshop	pg. 17
April 21 - 22	Women's "Get-Away" Weekend 	pg. 18
April 27 - 29	Birds of Joshua Tree National Park*	pg. 10
April 28	Discover Pine City	pg. 14
April 28 - 29	<b>NEW!</b> Advanced Mammal Tracking in Joshua Tree National Park 	pg. 9
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May 5 - 6	Citizen Science: Phenological Monitoring in JTNP*	pg. 10
May 5 - 6	Night Sky Photography	pg. 17
May 19	Desert Night Sky: Planets to Galaxies	pg. 10
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August 11	Keys Ranch Sunset and Nightscape Photography 	pg. 17



CAMPING OPTION

\* OFFERED FOR UNIVERSITY CREDIT

DOI-2020-05 03247

# Registration Information

## How Fit Do You Need To Be?

If you take part in a guided hike in Joshua Tree National Park, you will need to carry a backpack with food, clothing, water and other essentials that generally weighs up to 15 pounds. You will be exercising with either heat or cold, typical of the Mojave desert and elevation gain. And, you may need to scramble over large boulders along the route. To help you decide on which course is best for you, please take into account the "Hike Level" ratings and note that these ratings are only guidelines. What is labeled "strenuous" might be routine for a very fit visitor. For the most precise information about each activity or the effects of the desert environment, please call us at **760-367-5535**.

## Registration

The Desert Institute accepts registrations year round for special programming. Registrations for fall field classes start in June and registrations for spring field classes start in November. If you wish to enroll with the registration form on page 24, please enclose a check payable to **Joshua Tree National Park Association**. Of course, you can contact the Desert Institute for enrollment and for any questions about our programs:

Phone: 760 367 5535

Email: [desertinstitute@joshuatree.org](mailto:desertinstitute@joshuatree.org)

On line: [joshuatree.org](http://joshuatree.org)

Mail: Use the form on page 24

Please honestly assess your fitness level by reviewing the hiking level descriptions on this page and in the course descriptions.



**EASY** - Leisurely to moderate pace up to 3 miles per day through relatively flat terrain with frequent stops.



**MODERATE** - Moderate, steady pace up to 6 miles per day with some elevation gain and loss through some loose, rocky or uneven terrain.



**STRENUOUS** - Longer rigorous hikes at a moderate to brisk pace up to 12 miles per day with significant elevation gain and loss up to 3,000 feet through steep terrain, with possible rock scrambling.



**EXTREME** - Course includes rock scrambling throughout a significant portion of route. Good balance, full range of motion, and three points of contact while scrambling are necessary.

Photos by Kevin Wong, unless credited otherwise.



The images and written content used within this website or document are intended to represent offered courses; however weather, landscape and other conditions during the actual course may be different. Certain catalog and course content may be in the public domain and some content, such as photographs, may have been contributed or licensed by third parties and may be protected by copyright. Desert Institute course descriptions may contain links or URLs to third party websites. These sites are not under the control of the National Park Service, Joshua Tree National Park or the Desert Institute, who provide them as a convenience only and their use shall not be construed as an endorsement of, sponsorship of, or affiliation with the website; and they are not responsible for the contents.

Course dates, instructors and class content are subject to change. Contact the Desert Institute at 760-367-5535 for the most up-to-date information.

**SIGN UP ONLINE**  
Click On Class Name

## "How-To" Courses

How-to's and step-by-step advice from the experts. Taking a clue from our course participants for more classes on "how-to" explore and enjoy Joshua Tree National Park, we are offering the following programs for those who want to develop new skills.

### Springtime Camping in Joshua Tree National Park

Date/Time: Saturday, March 10, 8 am - 5 pm  
Sunday, March 11, 8 am - 4 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$110 JTNPA/PINE member, \$120 non member  
Instructors: Tom Scanlan, Camping and Hike Leader  
Pam Kersey, Camping and Hike Leader  
Hike Level: Moderate

**NEW!**



If you have a taste for adventure, a thirst for wild spaces or just want to improve your outdoor skills, sign up here! Learn how to thrive in the outdoors with camping basics or refresh your current skills, improve your knowledge of natural science and have fun with a small group of other intrepid explorers of Joshua Tree National Park. On this weekend camping workshop you'll learn about the desert while hiking through it, share stories around a crackling campfire, and acquire useful skills that will transform the great outdoors into your own spectacular backyard. No prior camping experience is necessary, though some basic equipment is required. Camping equipment can be rented locally from outfitters. More experienced campers who'd like to brush up on their skills or just come to have a good time are also welcome. This weekend of classes will be held at the exclusive Lost Horse Campground, a beautiful location that is perfect for this program!

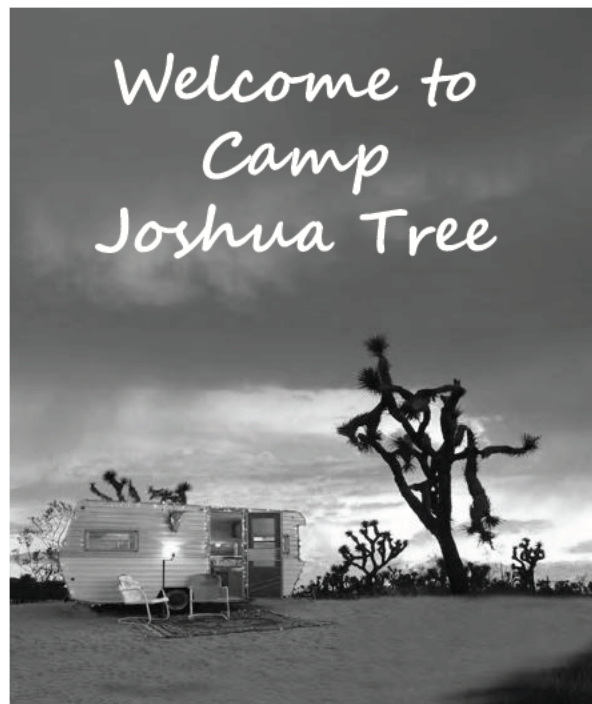
### "How-To" Navigate with Map and Compass

Date/Time: Saturday, April 7, 8 am - 4 pm  
Sunday, April 8, 8 am - 1 pm  
Meet at: Black Rock Visitor Center  
Fee: \$85 JTNPA/PINE member, \$95 non member  
Instructor: Misha Askren, Sierra Club Outings Leader  
Hike Level: Moderate



Do you want the confidence to explore the desert without getting lost, even when you leave the trail? Misha Askren will teach participants how to navigate using a map and compass in this two-day field class. Participants will learn the basics of topography, map reading, using a compass, and the history of navigation during classroom and field exercises on Saturday. On Sunday, participants will put all their skills together in a route-finding adventure in the wilderness of Joshua Tree National Park, going to interesting spots and finding caches. These map and compass skills will allow participants to explore the wilderness and find their way back home. They also can be potentially lifesaving, in the event someone does get lost. No previous experience with compass or topo maps is needed. Participants will need to provide their own compass. Maps will be provided.

Suggested Reading: *Wilderness Navigation* by Mike and Bob Burns, found in the Visitor Centers or order at [joshuatree.org/store](http://joshuatree.org/store).



### "How-To" Survive in the Desert

Date/Time: Saturday, April 14, 9 am - 4 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$60 JTNPA/PINE member, \$70 non member  
Instructor: Kelly Crawford, Joshua Tree Excursions  
Hike Level: Easy



Learn the essential "big five" skills needed to safely explore the sometimes harsh and often challenging desert landscape of Joshua Tree National Park. This workshop will provide an introduction to the fundamental skills needed for surviving in desert regions and the hazards associated with desert travel. Relying on classroom lecture and a field class at Lost Horse Campground, students will become familiar with desert skills such as emergency shelters, water location, signal mirror practice, overview of heat-related injuries, venomous creatures, and survival kits for car and backpack. Kelly Crawford will teach the physical skills and mental processes that will prepare participants to discover some of the most beautiful and most dangerous habitats of the world. The class will also emphasize that the reliance on personal digital equipment (GPS and cell phones) can lead to catastrophic failures. Learn how to be self-reliant and don't become a Search and Rescue statistic.

This class is not to be missed if you plan on spending any time in the desert!



# "How-To" Courses

SIGN UP ONLINE  
Click On Class Name

## Women's "Get Away" Weekend

Date/Time: Saturday, April 21, 8 am - 5 pm  
Sunday, April 22, 8 am - 4 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$110 JTNPA member, \$120 non member  
Instructors: Pam Kersey, Camping and Hike Leader  
Robin Balch, Camping and Hike Leader  
Hike Level: Moderate



Spend a weekend with the Desert Institute at Joshua Tree National Park where you can go to unplug, to get away, to learn new skills and to enjoy the company of other course participants. Trade in your computer, cell phone, Instagrams, clocks, schedules and workplace jargon for an off-the-grid weekend with the girls - two days of pure unadulterated fun and education! Join Pam and Robin on hikes, camping and camp cooking, basic navigation and desert survival. This weekend of classes will be held at the Lost Horse Campground, a beautiful location that is perfect for this program!



## Advanced Mammal Tracking in Joshua Tree National Park **NEW!**

Date/Time: Saturday, April 28, 8:15 am - 5:30 pm  
Sunday, April 29, 8:30 am - 2 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$110 JTNPA member, \$120 non member  
Instructor: Jim Lowery, Primitive Skills Teacher, Author of *The Tracker's Field Guide*  
Hike Level: Easy



This brand-new workshop is open to students who have taken Mammal Tracking in Joshua Tree from Jim Lowery and Mary Brooks in recent years. We move beyond the basic track identification and interpretation skills you learned (with a refresher of course) to explore the habitat around Lost Horse Campground, looking for patterns of movement and behavior for the local bobcats, badgers, gray foxes, coyotes, woodrats and other mammals. We will follow animal trails, interpret the posture and mood of individuals from their tracks and map habitat use as we also hone our awareness techniques to become part of the landscape we track in. **This is not a beginning class in tracking**, but rather an excellent opportunity to reclaim your tracking interest and make advances in your skills.

Camping option available on Saturday evening for participants at the Lost Horse Campground, a beautiful location that is perfect for this program!

*I began taking Desert Institute classes for professional development purposes. I immediately fell in love with every aspect from the expertise of the instructors, to the attentiveness of the volunteers and the high quality and variety of subjects the classes cover! Every class has exceeded my expectations.*

*I have a new found appreciation and sense of wonder for not only Joshua Tree National Park but also the desert.*

*These classes continue to inspire me to share with students some of the wonders and wildlife that JTNP and the desert have to offer. There are many classes I have yet to take and I look forward to the adventures that are yet to come!*

*- Janna Newman*





SIGN UP ONLINE  
Click On Class Name

# Natural Science Courses

## Rocks and Minerals of Joshua Tree National Park (Geosciences x425.1, 1.5 units)

Date/Time: Friday, February 16, 6 pm - 9 pm  
Saturday, February 17, 8 am - 5 pm  
Sunday, February 18, 8 am - 4 pm  
Meet at: Oasis Visitor Center  
Noncredit Fee: \$135 JTNPA member, \$145 non member  
Credit Fee: \$210 JTNPA member, \$220 non member  
Instructor: Dee Trent, Professor Emeritus, Citrus College  
Hike Level: Easy



Learn the geologic story of tectonic plates, magma, and the geologic time when the building blocks of Joshua Tree National Park were formed. Dee Trent will explain the critical principles that shaped the rocks and minerals of this area into the blonde granite and pre-Cambrian gneiss that are icons of the Mojave and Colorado Deserts. Participants will focus on identification of minerals and the three basic rock types. The class will apply its knowledge in the field by exploring numerous examples of the major rock types, contact zones, and unique geologic features such as polka dot granite and pink feldspar megacrysts.



## Wildflower Wanderings

Date/Time: Saturday, March 3, 9 am - 4 pm  
Meet at: Oasis Visitor Center  
Fee: \$60 JTNPA/PINE member, \$70 non member  
Instructor: Darrell Shade, Botanist, Desert Naturalist  
Hike Level: Easy to Moderate



Saturate your senses with the beauty of a wildflower bloom in Joshua Tree National Park. Darrell Shade will lead this all-day field class on a tour through the colorful flowers of a desert spring. Shade will entertain participants with descriptions of the flora, their botanical characteristics, and show how to identify the unique blossoms of the park. Shade will identify the flowers of the park by scientific and common names, allowing the participants to get to know these amazing plants.

**This class will repeat again on Saturday, April 7 with the same times and itinerary. Please be sure to enroll in the correct class date!**

## Geology of Amboy Crater

Date/Time: Saturday, March 3, 9 am - 3 pm  
Meet at: Amboy Crater National Natural Landmark  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Tor Lacy, Cerritos M.S., Geology, Professor, Cerritos College  
Hike Level: Moderate



Volcanoes of Southern California? We are famous for faults, and earthquakes, and maybe for other geologic phenomena, but not volcanoes. Still, when we look to our landscape we find evidence of volcanic activity, some of it quite recent. In this class we will learn basic concepts of geology and explore Amboy Volcano and the surrounding lava fields to understand why they formed, and if they could become active again! Designated a National Natural Landmark in 1973, Amboy Crater was recognized for its visual and geological significance. There are a number of dormant volcanoes in the Mojave desert, and Amboy crater is a perfect example of a cinder volcanic cone very similar to the volcanoes throughout the region. Join Professor Tor Lacy on this all-day field trip.

Suggested Reading: *Roadside Geology of Southern California* by Sylvester and Gans, found in the Visitor Centers or order at [joshuatree.org/store](http://joshuatree.org/store)

## Desert Invertebrates: A Macro Photography and Microscopy Primer (Biology x412.19, 1 unit)

Date/Time: Saturday, March 10, 9 am - 4:30 pm  
Sunday, March 11, 9 am - 4 pm  
Meet at: Oasis Visitor Center  
Noncredit Fee: \$135 JTNPA member, \$145 non member  
Credit Fee: \$185 JTNPA member, \$195 non member  
Instructor: Paul DeLey, Ph.D., Zoology, UC Riverside  
Hike Level: Easy to Moderate



Participants will be introduced to the major groups of respectively macroscopic and microscopic invertebrates found in Southern California's deserts, where and when to find them, and how to observe and identify them with the aid of online tools after taking digital macro photographs in the field (in the case of insects and other animals visible to the naked eye), or with the aid of a compound microscope in the lab (for smaller animals). The first part will include an outline of basic techniques for approaching and photographing different macro subjects with a compact camera or an interchangeable lens/SLR camera. In the second part we will demonstrate simple techniques for isolating microscopic invertebrates from different materials, how to transfer them to microscope slides and how to operate a compound microscope to observe them. **Class size is limited, please sign up early!**

# Natural Science Courses

**SIGN UP ONLINE**  
Click On Class Name

## Flora of Joshua Tree National Park (Botany x420.5, 1.5 units)

**Date/Time:** Friday, March 9, 6 pm - 8:30 pm  
Saturday, March 10, 8 am - 5 pm  
Sunday, March 11, 8 am - 1 pm  
**Meet at:** Black Rock Canyon Nature Center  
**Noncredit Fee:** \$135 JTNPA member, \$145 non member  
**Credit Fee:** \$210 JTNPA member, \$220 non member  
**Instructors:** Kurt Leuschner, M.S., Wildlife Ecology  
**Hike Level:** Moderate



Students in this informal but purposeful class will have the opportunity to observe many of the flowering plants in Joshua Tree National Park, learn their names and something about their different places in the park's greater plant community. In addition, students will gain familiarity with the tools necessary to identify plants on their own. Friday's class will include a basic botany lecture, with emphasis on desert plants wherever possible and as appropriate. This will be followed by an introduction to basic field guides, and to the use of plant keys in identification. A lab session will give students the opportunity to examine plant and, especially, flower parts in close detail with instructor prompts and guidance. Saturday and Sunday are field days and will be spent in the park. With instructor assistance, students, in pairs or small groups, will practice identifying flowering plants. Walking distances for this class are minimal.



Amboy Crater National Natural Landmark

## Desert Tortoise Conservation Biology (Biology x412.18, 1 unit)

**Date/Time:** Saturday, March 17, 8 am - 6 pm  
**Meet at:** Copper Mountain College, Joshua Tree  
**Fee:** \$75 JTNPA member, \$85 non member  
**Credit Fee:** \$125 JTNPA member, \$135 non member  
**Instructors:** Kristin H. Berry, Ph.D. USGS, Paul Delaney, Ph.D., Integrative Biology, Professor, Ed LaRue, M.S., Biologist, Michael Vamstad, M.S. Ecology and Scott Hoffman, M.S. Biology, USFWS  
**Hike Level:** Easy



*This class is sponsored by Copper Mountain College*

The desert tortoise *Gopherus agassizii* is a fascinating species whose existence is threatened. This class will highlight critical issues in desert tortoise conservation, and the unique morphological, physiological, and behavioral traits essential for these reptiles to survive. In the morning participants will explore the tortoise preserve at Copper Mountain College (CMC). Moving to the classroom, Kristin Berry Ph.D. will explain the ecology, life history and current threats to this species. Edward LaRue Jr. M.S., will then show how to detect tortoises in the field, and discuss their occurrence in the Morongo Basin. Michael Vamstad M.S. will discuss tortoise conservation and education activities in Joshua Tree National Park. Scott Hoffman M.S. will describe the U.S. Fish and Wildlife Service's range-wide monitoring program for desert tortoises. Paul Delaney Ph.D. will summarize preserve management, and the remarkable variety of adaptations exhibited by these amazing animals. Participants then return outside to practice detecting tortoises, scat, tracks and burrows using field equipment. Course fee includes continental breakfast and lunch.

## Biological Soil Crusts of Joshua Tree National Park (Biology x412.28 1.0 unit)

**Date/Time:** Saturday, March 17, 9 am - 5 pm  
Sunday, March 18, 9 am - 4 pm  
**Meet at:** Oasis Visitor Center  
**Noncredit Fee:** \$110 JTNPA member, \$120 non member  
**Credit Fee:** \$160 JTNPA member, \$170 non member  
**Instructors:** Nicole Pietrasiak, Ph.D., Theresa Clark, M.S.  
**Hike Level:** Easy to Moderate



The desert floor may look like dirt and rocks but it is full of living small and microscopic organisms vital to the park's ecosystem. Many of these organisms live in biologically active soil crusts that cover the first inch of the desert soil surface. In this field class Nicole Pietrasiak will introduce crypto-biotic soil crusts with an emphasis on soil algae, lichens, and mosses. Participants will study the secret life of these microscopic organisms as they demystify this thin layer of soil. Nicole will discuss the components of crusts such as cyanobacteria (one of the oldest known life forms on earth), green algae, diatoms, bacteria, fungi, and lichens. Theresa Clark will discuss arid land moss survival. The instructors will also discuss why these organisms are important to biodiversity and ecological function in arid lands. During the lab session, participants will see the biodiversity of the park's crusts up close through two different types of microscopes. On the second day, the class will go into the field to identify and assess the condition of several types of algal, moss and lichen soil crust communities found in JTNP.

DOI-2020-05 03252

SIGN UP ONLINE  
Click On Class Name

# Natural Science Courses

## Ecology of Joshua Tree National Park (Biology x41 2.4, 2 units)

Date/Time: Saturday, March 24, 8 am - 5 pm  
Sunday, March 25, 7:45 am - 4:45 pm  
Meet at: Oasis Visitor Center  
Noncredit Fee: \$110 JTNPA member, \$120 non member  
Credit Fee: \$210 JTNPA member, \$220 non member  
Instructor: Allan Schoenherr, Ph.D., Ecology,  
Professor Emeritus  
Hike Level: Easy



Join Allan Schoenherr to learn about the desert environment and the unique plants, such as Joshua trees, and animals that define Joshua Tree National Park. Schoenherr will begin with an overview of the North American deserts and then focus on desert ecology in the park. Presentations will explain the relationships between living organisms as well as the adaptations that allow life to survive in arid landscapes. The class will visit multiple sites in the park where the two major ecosystems, the Mojave and Colorado Deserts, will be discussed. Participants will learn the distinctive qualities of these ecosystems, what plants and animals call them home, and identify flora and fauna in the field.



## Geology of the Mojave National Preserve

Date/Time: Saturday, April 7, 9 am - 5 pm  
Sunday, April 8, 9 am - 4 pm  
Meet at: Hole in the Wall Campground, MNP  
Fee: \$120 JTNPA member, \$130 non member  
Plus campground fees  
Instructor: Ted Reeves, Instructor, University of the Pacific  
Hike Level: Moderate



From the swirling sands of Kelso Dunes to Hole-in-the-Wall's violent volcanic remnants, Mojave National Preserve serves as a showcase of ancient and modern geologic processes. Rocks here reveal the stories of prehistoric landscapes as old as 2.7 billion years - over half the age of the Earth! Explore and learn about the geology of the vast Mojave National Preserve with Ted Reeves, on this overnight camping excursion with a base camp at the Hole-In-The-Wall campground. You will need to provide your own camping equipment, food and drinks as there are few facilities in this national preserve. This class will take you to spectacular locations within the Mojave National Preserve including the newly re-opened Mitchell Caverns. Course fee includes the entrance fee for the caverns. Don't miss out on this opportunity! **Class size is limited to 12 participants.**

## Geology of the Marble Mountains

**NEW!**

Date/Time: Saturday, April 21, 9 am - 3 pm  
Meet at: Roy's in Amboy  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Alessandro Grippo, Ph.D., Geological  
Sciences  
Hike Level: Moderate



The Marble Mountains are a rather small mountain range located in one of the harshest, driest parts of the Mojave Desert, in southeastern California near the tiny towns of Chambless and Cadiz. What makes the Marble Mountains especially attractive to paleontologists is the comparatively rich Cambrian fossil biota which can be found in a particular rock layer, the Latham Shale, that is well-exposed in the southern part of the range, as well as in some nearby ranges such as the Bristol Mountains. The Latham Shale and the rock layers below and above it comprise a well-studied section of Lower and Middle Cambrian strata, which extends, with some variation, over a large part of the southern Mojave Desert. The dominant fossils in the Latham Shale are trilobites. Trilobites form one of the earliest known groups of arthropods. Join Professor Alessandro Grippo on this all-day field trip.

Suggested Reading: *Roadside Geology of Southern California* by Sylvester and Gans, found in the Visitor Centers or order at [joshuatree.org/store](http://joshuatree.org/store)

## Advanced Mammal Tracking in Joshua Tree National Park

**NEW!**

Date/Time: Saturday, April 28, 8:15 am - 5:30 pm  
Sunday, April 29, 8:30 am - 2 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$110 JTNPA member, \$120 non member  
Instructor: Jim Lowery, Primitive Skills Teacher, Author of  
*The Tracker's Field Guide*  
Hike Level: Easy



This brand-new workshop is open to students who have taken Mammal Tracking in Joshua Tree from Jim Lowery and Mary Brooks in recent years. We move beyond the basic track identification and interpretation skills you learned (with a refresher of course) to explore the habitat around Lost Horse Campground, looking for patterns of movement and behavior for the local bobcats, badgers, gray foxes, coyotes, woodrats and other mammals. We will follow animal trails, interpret the posture and mood of individuals from their tracks and map habitat use as we also hone our awareness techniques to become part of the landscape we track in. This is an excellent opportunity to reclaim your tracking interest and make advances in your skills.

Camping option available on Saturday evening for participants at the Lost Horse Campground a beautiful location that is perfect for this program!



# Natural Science Courses

**SIGN UP ONLINE**  
Click On Class Name

## Birds of Joshua Tree National Park (Biology x404, 1 unit)

Date/Time: Friday, April 27, 6 pm - 8 pm  
Saturday, April 28, 7:30 am - 4:30 pm  
Sunday, April 29, 7:15 am - 1:15 pm  
Meet at: Black Rock Nature Center  
Noncredit Fee: \$135 JTNPA member, \$145 non member  
Credit Fee: \$185 JTNPA member, \$195 non member  
Instructor: Kurt Leuschner, M. S., Wildlife Ecology  
Hike Level: Easy to Moderate



The deceptively barren Mojave Desert landscape is home and resting grounds for numerous endemic migratory bird species. Kurt Leuschner will guide the class through the Mojave and Colorado Deserts to identify common and rare birds. Leuschner's focus will be on identifying individual species and separating summer and winter residents from true migrants. He will discuss nesting and feeding habits, interactions with plant life, and adaptive strategies. Participants will have the thrill of identifying the park's common spring bird species, better understand the role each plays in the desert ecosystem, and have the chance to sight species like the Pinyon Jay, Prairie Falcon, or Lawrence's Goldfinch.

*This was hands down the best class I have ever taken. That was due to your thorough knowledge of the subject and willingness to share. Thank you!*



## Citizen Science: Phenological Monitoring in JTNP (Biology x413, 1 unit)

Date/Time: Saturday, May 5, 6 pm - 8 pm  
Sunday, May 6, 8 am - 5 pm  
Meet at: Black Rock Nature Center  
Noncredit Fee: \$135 JTNPA member, \$145 non member  
Credit Fee: \$185 JTNPA member, \$195 non member  
Instructor: Monica Gorman, Ph.D., Biology, Professor, Los Angeles City College  
Hike Level: Moderate to Strenuous



Climate change is on everyone's mind these days, and as Californians, we are all wondering what effects rising global temperatures are going to have on our state. Here's your chance to help answer that question. Learn how to become a citizen scientist and collect data on the effects of climate change on plant phenology – or life cycle changes – in Joshua Tree National Park or your own backyard for the California Phenology Project. The Project is gathering data on the effects of global warming on when plants produce leaves, flowers, and fruits to learn whether plants are engaging in these activities earlier as temperatures rise. We will spend Saturday night in the classroom learning about the Project, including basic plant biology and the plants that are being monitored in Joshua Tree National Park. We will spend Sunday monitoring plants on Ryan Mountain. The hike up Ryan is 1.5 miles (3.0 miles round-trip) with an elevation gain of about 1000 feet and will end with fantastic views of the Park from the summit. We will return to the classroom to enter our data. Come be part of the solution, not the problem!

## Desert Night Sky: Planets to Galaxies

Date/Time: Saturday, May 19, 2 pm - 10 pm  
Meet at: Oasis Visitor Center  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: David Chappell, Ph.D., Astronomy, Professor, University of LaVerne  
Hike Level: Easy



Warm May nights are a perfect time to experience the newly emerging spring night sky. The brilliant stars of winter have sunk beneath the horizon and spring galaxies swirl high in the heavens. David Chappell will lead participants on a tour of the heavens starting with the planets and ending with distant galaxies. Starting indoors, the course will cover basic astronomy and practical observing techniques as well as recent discoveries in astronomy. Just before sunset, the class will travel into the park to observe the night sky. Telescopes and binoculars will be used to see the rings of Saturn, the Great Orion Nebula, dozens of galaxies, and more.



**IF YOU LOVE** observing nature and learning about Joshua Tree National Park, expand your knowledge through the **Joshua Tree Master Naturalist Series**. Eight comprehensive courses on key Joshua Tree topics are designed to broaden your understanding of the ecology, plants, geology, wildlife, and history of the park. Through field-based excursions and lectures, you'll cultivate observations skills that are the hallmark of a good naturalist. By documenting field observations through sketches, journaling, photography and more, you'll learn how to make a deeper connection to nature. When you complete eight courses, of your choice, from our thirteen science classes that we offer annually, you will receive your "Joshua Tree Naturalist" certification and a Joshua Tree National Park hoodie. Courses will be offered yearly and certification may be completed over time. These eight courses in the **Joshua Tree Master Naturalist Series** are also approved for credit from U.C. Riverside Extension. U.C. Riverside credit **is not required** for the Joshua Tree Master Naturalist certificate.

## 2018 NATURALIST SERIES

Rocks and Minerals of Joshua Tree National Park  
February 16 - 18, 2018

Flora of Joshua Tree National Park  
March 9 - 11, 2018

Desert Invertebrates: Diversity Great and Small -  
A Macro Photography and Microscopy Primer  
March 10 - 11, 2018

Desert Tortoise Conservation Biology  
March 17, 2018

Biological Soil Crusts of  
Joshua Tree National Park  
March 17 - 18, 2018

Ecology of Joshua Tree National Park  
March 24 - 25, 2018

Birds of Joshua Tree National Park  
April 27 - 29, 2018

Citizen Science: Phenological Monitoring in  
Joshua Tree National Park  
May 5 - 6, 2018



# The Joshua Tree Master Naturalist Series

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# Cultural History Courses

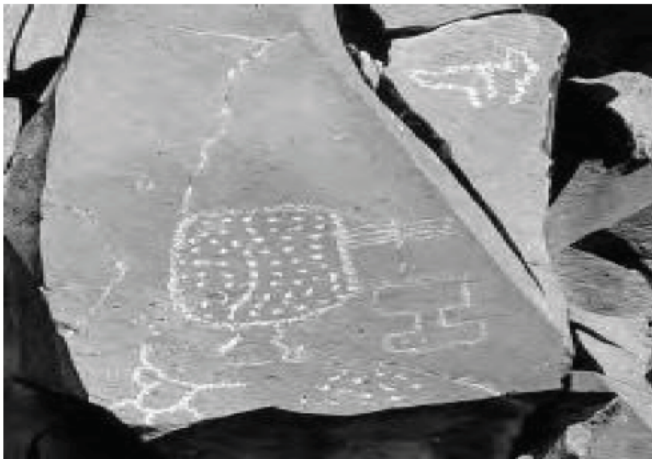
**SIGN UP ONLINE**  
Click On Class Name

## Rock Art of Southern California

Date/Time: Sunday, February 18, 8 am - 6 pm  
Meet at: Pilot Travel Center, North Palm Springs  
Fee: \$60 JTNPA/PINE member, \$70 non member  
Instructor: Daniel McCarthy, M.S., Anthropology  
Hike Level: Easy



Discover the mystery of the enigmatic symbols left behind by the Indigenous Peoples with Daniel McCarthy. McCarthy will provide a glimpse into the life of the Native Nations through pictographs and petroglyphs preserved in stone. This all-day field class will carpool from the Coachella Valley to Corn Springs in the Salton Sea area and end in Idyllwild. Participants will not only have the thrill of seeing rock carvings and paintings in their original setting but will learn what is known of their stories. The class will also learn about the migratory patterns of the Native Peoples, their places of habitation, and the reason they traveled seasonally. **Participants will drive over 150 miles during the class.** Carpooling is recommended.



## Intaglios Along the Colorado River

Date/Time: Saturday, March 10, 7:30 am - 6 pm  
Meet at: Oasis Visitor Center  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Daniel McCarthy, M.S., Anthropology  
Hike Level: Easy



Intaglios or large figures laid out on the ground are one of the unsolved mysteries of modern Archaeology. Officially classified as a form of rock art, there are over 300 intaglios in the American Southwest and Mexico. Daniel McCarthy will lead this all-day field class to three sites to explore these larger than life images preserved on the desert floor. The best known of these are the Blythe Intaglios along the Colorado River that are famous for multiple human-like figures. The largest human figure is 240 feet in length! Participants will learn about these "gravel pictographs" and their significance. This is a great opportunity to visit these immense drawings with an expert archaeologist. Participants will drive 230 miles (round trip) during the class, from Twentynine Palms to just north of Blythe where the class will finish. Carpooling is encouraged.

## Native American Plant Uses

Date/Time: Sunday, March 18, 9 am - 4 pm  
Meet at: Big Morongo Canyon Preserve  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Daniel McCarthy, M.S., Anthropology  
Hike Level: Easy



*This class is sponsored by Big Morongo Canyon Preserve*

Discover the abundant uses of native desert plants with Daniel McCarthy. McCarthy will teach participants about the plants historically harvested by the native peoples of Southern California for food, medicine, and utilitarian purposes. The program will start with an overview of local Native American tribes and how culture defines plant use. Attendees will learn about plant communities, habitat, and distribution, focusing on the ethnobotany of key species found in the Mojave and Colorado Deserts. In the afternoon, the class will identify edible plants found in Big Morongo Canyon Preserve. No plants will be harvested. Respectful gathering practices will be discussed as well as restrictions on collecting on federal lands and in the National Park.



## La Rumorosa Rock Art of Baja California

Date/Time: Friday, March 16, 7 pm - 8 pm  
Meet at: Bell Center, Copper Mountain College  
Fee: Free  
Presenter: Don Liponi, Ph.D., Author

The Kumeyaay and their ancestors have lived on the Baja-California border at least 10,000 years in accordance with a recent excavation near Jacumba. Their descendants are probably the Yuman speaking Tipai. The striking red, black and white pictographs were painted in caves and on rocks along the southern California border, up the Gila River and along the Colorado River, ranging from the lower Grand Canyon to the Sea of Cortez. This tradition of ancient art is called La Rumorosa, after a site in northeastern Baja, Mexico. No one knows for certain who painted the pictures or carved the images, nor can any modern human tell us exactly what the rock art is portraying, though interviews with Native Tipai point to the realm of the spiritual - a shamanistic tradition.

Don Liponi, the author of *La Rumorosa Rock Art* agrees with that indigenous assessment; he recognizes that the value of preserving of archaeological sites and saving wilderness draws from the same well. The most intriguing and complex artistic motifs suggest the crossing of human boundaries to meld with wild nature - that wilderness which has always been our home.



**SIGN UP ONLINE**  
Click On Class Name

# Guided Hikes in JTNP

## Summit Monument Peak

**NEW!**

Date/Time: Saturday, February 17, 8 am - late afternoon  
Meet at: Cottonwood Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: Kevin Powell, Author, Photographer  
Hike Level: Strenuous /Extreme - 6.4 miles round trip



This strenuous, cross country hike takes you to the top of the seldom visited high point of the Hexie Mountains, Monument Mountain (Elev. 4814'). The Hexie Mountains are a small range of west to east running mountains within the Park. This 6.4 mile round trip hike follows the southeast ridge of the mountain up to the base of the rocky, cone-shaped summit, where an easy rock scramble leads to the top. Once on top there is a commanding 360 degree view that includes the Cottonwood, Eagle and Pinto Mountains, and portions of the vast Pinto Basin. Total elevation gain is 1700'.

## Explore the Wonderland of Rocks

Date/Time: Sunday, February 18, 8 am - early afternoon  
Meet at: Joshua Tree Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: Christian Delich, JTNP Ranger  
Hike Level: Moderate - 4 miles round trip



The Wonderland of Rocks is a large labyrinth of granite formations and meandering corridors. It's an easy place to get lost, but it's also full of secret, picture-postcard settings, wide-eyed views, and any number of natural surprises. We will drive to Barker Dam and walk the nature trail to the lake bed and follow the wash into the Wonderland of Rocks where we will scramble up to the top of the South Astrodome (optional) where we will view the entire Wonderland of Rocks. The hike will loop through the Wonderland to Wall Street Mill and back to Barker Dam.

## Explore Ruby Lee Mill

Date/Time: Saturday, February 24, 7 am - late afternoon  
Meet at: Oasis Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: Kevin Powell, Author, Photographer  
Hike Level: Moderate - 6 miles round trip



Tucked away in the remote Hexie Mountains is an old mining related mill site known as the Ruby Lee. Long abandoned and infrequently visited, this moderate, six mile hike will explore a classic desert wash, then, follow a barely discernible old mining road up to the actual mill site. Along the way the hiker will be treated to views of the vast Pinto Basin and the rugged Pinto and Coxcomb Mountains. If the wildflowers are blooming, the area could be ablaze with color and provide for good photography and birding opportunities. Once at the mill site, there will be a brief discussion of the mill's origin and history.

## Explore the Coxcomb Inner Basin

Date/Time: Sunday, March 18, 7 am - late afternoon  
Meet at: Oasis Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: Christian Delich, JTNP Ranger  
Hike Level: Strenuous - 10 miles round trip



Explore a little visited region of the park, the Coxcomb Mountains are located 39 miles east of Twentynine Palms. The inner basin of the Coxcomb Mountains is the "heart" of the most rugged and scenic mountain ranges in Joshua Tree National Park. Views of the Aqua Peaks (Tensor, Spectre and Dyadic) are truly spectacular!

## Hike to Desert Queen Mine

Date/Time: Saturday, March 25, 8 am - early afternoon  
Meet at: Oasis Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: De Karlen, Naturalist, Desert Guide  
Hike Level: Moderate - 4 miles round trip



Hike into history- the Desert Queen Mine and wash. Learn about Joshua Tree's more colorful figures, including the McHaney Gang, as well as the legendary desert pioneer, Bill Keys, who owned the mine for decades. We'll follow the daily life of miners and mining before Joshua Tree became a park - exploring ruins, relic equipment, and closed-off mine shafts, each offering a glimpse into the Park's exciting and challenging past. An easy to moderate hike and perfect for those interested in learning more about Joshua Tree National Park.

## Discover Pine City

Date/Time: Saturday, April 28, 8 am - early afternoon  
Meet at: Oasis Visitor Center  
Fee: \$35 JTNP member, \$45 non member  
Instructor: De Karlen, Naturalist, Desert Guide  
Hike Level: Moderate - 4 miles round trip



This hike is just the hike for those still a little intimidated by Joshua Tree's vastness: easy, informative, and just the right length. Beginning at the Pine City backcountry board, this trail is less traveled and one of Joshua Tree's nicest "hidden" treasures. It's an architectural confection of Joshua Tree's famous high desert plants, its human history and monster artful boulders, leading to an expansive view of the low desert. We'll have lunch in a nearby pinyon pine burst of greenery and shade, then take an additional side-foray to the Desert Queen Mine, with a tale of its dramatic mining past.

# Guided Hikes in JTNP

**SIGN UP ONLINE**  
Click On Class Name

## How Fit Do You Need To Be?

If you take part in a guided hike in Joshua Tree National Park, you will need to carry a backpack - with food, clothing, water and other essentials - that generally weighs up to 15 pounds. You will be exercising with either heat or cold, typical of the Mojave desert and elevation gain. And, you may need to scramble over large boulders along the route. To help you decide on which course is best for you, please take into account the "Hike Level" ratings and note that these ratings are only guidelines. What is labeled "strenuous" might be routine for a very fit visitor. For the most precise information about each activity or the effects of the desert environment, please call us at 760-367-5535.

### Military Scholarships

Through a grant provided by the Marine Corps Air Ground Combat Center Officers' Spouses' Club, the Desert Institute offers a limited number of scholarships for our educational programs to active and retired Marines and their family members on the 29 Palms MCAGCC. For more information and qualification requirements, please call 760 367 5535.



## Teachers

Our credit courses are designed to meet the professional development needs of educators for career and salary advancement. Come for a weekend of inspiration, education and fun in Joshua Tree National Park! Course credit is offered through UC Riverside Extension. Teachers may apply for Professional Career Development through their school district.

<b>Rocks and Minerals of JTNP</b>	1.5 units
<b>Biologic Soil Crusts of JTNP</b>	1 unit
<b>Desert Invertebrates</b>	.5 units
<b>Flora of Joshua Tree National Park</b>	1.5 units
<b>Desert Tortoise Conservation Biology</b>	.5 unit
<b>Ecology of JTNP</b>	1.5 units
<b>Phenological Monitoring in JTNP</b>	1 unit





**SIGN UP ONLINE**  
Click On Class Name

# Creative Arts Courses

## Joshua Tree Through the Lens

Date/Time: Sunday, March 3, 6:30 am - 5:30 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$75 JTNPA member, \$85 non member  
Instructor: Craig Fucile, Photography Instructor  
Hike Level: Moderate



Grab your camera and put on your hiking boots for this intensive all-day photo shoot in Joshua Tree National Park! Craig Fucile will guide the class in seeing the natural beauty of the park through the camera lens. The class will begin with a special "photographers only" session at Keys Ranch, focusing on how to capture the buildings and historic remnants at this remarkable homestead. Mid-morning the focus will shift to desert landscape. Fucile will share tips on how to record unique rock formations and vast views of the park. Participants are encouraged to bring a tripod with their camera.

This class will repeat again on **Sunday, March 4**. Please be sure that you enroll in the correct class.

**NEW!**

## Capturing Joshua Tree Landscapes with Acrylics

Date/Time: Saturday, March 17, 8:30 am - 4 pm  
Meet at: Joshua Tree Visitor Center  
Fee: \$75 JTNPA member, \$85 non member  
Instructor: Janis Commentz, Artist, Instructor  
Hike Level: Easy



Few destinations offer a landscape as unique as Joshua Tree National Park. Spend a day painting in beautiful Joshua Tree National Park. In this one-day class, you will focus on observation, setting an intention for the day, landscape details and painting brushstrokes full of color! Learn to create thumbnail sketches to develop a successful composition.

Janis Commentz is known for her color-intense palette and loose brush strokes. You will learn to condense vistas into simple elements to paint and to record in shadow and light. Learn to mix believable landscape colors. Develop tools to sketch and paint on canvas. The morning will be spent outdoors observing, sketching, learning what to look for in a potential landscape and blocking out a sketch on canvas. The afternoon will be spent developing your painting, using acrylic paints. The desert is a fragile environment and eco painting techniques will be used.

## Fine Art Photography in JTNPA

Date/Time: Friday, March 23, 7 pm - 9 pm  
Saturday, March 24, 5 am - 9 pm  
Sunday, March 25, 5 am - 3 pm  
Meet at: Oasis Visitor Center  
Fee: \$160 JTNPA member, \$170 non member  
Instructor: Ralph Nordstrom, Photographer, Instructor  
Hike Level: Easy to Moderate



Immerse yourself in the wonders of Joshua Tree National Park and connect with the enchantment to be found there. And what better way to explore the essence of fine art photography than in such a spectacular location. Our class will explore three elements of fine art photography – the nature of art, the artistic process and how to grow as an artist. The weekend schedule includes two sunrise shoots, two morning shoots, one sunset shoot, one optional night sky shoot (when conditions permit). There will be three classroom sessions: an orientation Friday night, the discussion on "The Essence of Fine Art" Saturday and an opportunity to share your photographs Sunday afternoon. Our experience of this marvelous land will be enhanced by camping in the Lost Horse Campground, from Friday through Sunday. This is an "action packed" workshop, so, bring your camera equipment, camping equipment and enthusiasm and watch your creativity soar! Call 760-367-5535 for more information on the camping option.



# Creative Arts Courses

**SIGN UP ONLINE**  
Click On Class Name

## Route 66 Photography Workshop

**NEW!**

Date/Time: Saturday, March 31, 10 am - sunset  
Meet at: BLM Office in Needles  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Sandi Wheaton, Photographer, Instructor  
Hike Level: Easy to Moderate



Route 66 through the Mojave Desert provides for great photographic images. During this workshop, you will explore Route 66 from Needles to Amboy, capturing storied abandoned sites, iconic vintage landmarks and sweeping desert landscapes. Join photography instructor Sandi Wheaton, who drove and photographed the entire length of Route 66 in 2009. Sandi has been photographing this stretch of Route 66 for years, and will share her knowledge of the many great shooting locations along this historic stretch of highway. This workshop is an opportunity for you to improve your photography and add to your skill set. Sandi will be offering suggestions for taking advantage of each location.

The workshop will begin in Needles and it will end in Amboy with a sunset shoot. The driving distance is approximately 75 miles from Needles to Amboy.



## Salton Sea Photography Workshop

**NEW!**

Date/Time: Saturday, April 21, 10 am - sunset  
Meet at: North Shore, Salton Sea  
Fee: \$60 JTNPA member, \$70 non member  
Instructor: Sandi Wheaton, Photographer, Instructor  
Hike Level: Easy to Moderate



The Salton Sea, California's largest lake, was formed by accident in 1905 by an engineering mishap during irrigation of the Imperial Valley. Over time, it has been a hotbed for sports fishing, a recreational area boasting more visitors than Yosemite, and an important wetland for migratory birds. Currently the sea is lined with dead fish and is shrinking fast, and its decaying ruins, plentiful birdlife, intriguing off-the-grid culture, and gorgeous light have made it something of a Mecca for photographers. Sandi Wheaton has been traveling to the Salton Sea annually to document its constantly changing landscape and knows exactly where the great places are for interesting photographs. In this workshop, you will explore the east shores and discover inspiring art sites like Leonard Knight's Salvation Mountain (featured in the movie "Into the Wild") and East Jesus sculpture garden, as well as spend time capturing beautiful natural landscapes and seascapes along the southeast shores of the Salton Sea. Be sure to bring rubber boots, as some of the best locations are muddy near the water's edge (but that's where the best photos are!). Please note that the Salton Sea is constantly changing, and some of the iconic structures that have been popular to photograph are rapidly disappearing – but new great photo locations are revealing themselves as well!



## Sandi Wheaton Photography Presentation

Date/Time: Thursday, March 29, 7 pm - 8 pm  
Meet at: Bell Center, Copper Mountain College  
Fee: Free  
Instructor: Sandi Wheaton, Photographer, Instructor

Join Sandi Wheaton in this presentation of her photographic images taken on Route 66 — yes, she traveled the full length of the "Mother Road." She will also introduce you to her work on the Salton Sea. She has been documenting the Salton Sea and its changes annually since her first visit in 2004.



SIGN UP ONLINE  
Click On Class Name

# Creative Arts Courses

## National Parks At Night Photography Workshop

**NEW!**

Date/Time: Saturday, April 21, 2:30 pm - 11 pm  
Meet at: Oasis Visitor Center  
Fee: \$150 JTNPA member, \$160 non member  
Instructor: Lance Keimig, Photographer, Instructor  
Hike Level: Easy



Join National Parks at Night and the Desert Institute in this special opportunity to learn night photography at Key's Ranch, a unique location in Joshua Tree National Park that is usually off limits at night, and only open to the public during the daytime on guided tours. Lance Keimig and Gabriel Biderman, who together have 50 years of experience photographing at night will share their techniques and vision to help you to create compelling night photographs. In the classroom, you'll learn about equipment choices, camera settings, and focusing in low light. On location, Gabe and Lance will help participants craft their images using a combination of long exposures and light painting techniques. The workshop takes place just before the first quarter moon, which will provide a measure of moonlight to illuminate the landscape, but not so much that it will overwhelm the stars in the night sky of Joshua tree National Park. This class is **limited to 8 participants**, so sign up early!

## Night Sky Photography

Date/Time: Saturday, May 5, 1 pm - 10 pm  
Sunday, May 6, 9:30 am - 12:30 pm  
Meet at: Oasis Visitor Center  
Fee: \$110 JTNPA member, \$120 non member  
Instructor: Dennis Mammana, M.S., Astronomy, Sky Photographer, Syndicated Columnist  
Hike Level: Easy



If you enjoy photography and are fascinated by the desert night sky, this two-session, hands-on workshop is for you! Dennis Mammana will teach participants how to use digital SLR cameras to create magnificent celestial portraits. The class will begin with tips for setting up and shooting the night sky. Saturday evening, weather permitting, participants will head into the park to try out their new knowledge under the real night sky with guidance from the instructor. The next day, Mammana will demonstrate how such night sky images can be brought from seemingly dull and drab to eye-popping with simple post-processing techniques. For the evening session you will need a DSLR that can be completely adjusted manually, a tripod and remote control, and a wide-angle or normal lens (f/2.8 or faster is best) that can be focused manually. Students should have a good working knowledge of their equipment prior to taking this class. **Class size limited to 12 participants.**

## Keys Ranch Nightscape Photography Workshop

Date/Time: Saturday, August 11, 6:30 pm - 1 am  
Meet at: Oasis Visitor Center  
Fee: \$150 JTNPA member, \$160 non member  
Instructor: Don Chambers, Nightscape Photography Instructor  
Hike Level: Easy



Most photographers put their camera away after sunset but today's digital camera technology makes it easier than ever for photographers to take photographs of the night sky. And the night sky in Joshua Tree is beautiful. With long exposures, the camera will gather light from thousands of stars not visible to the naked eye. When we add light painting techniques of interesting foregrounds, you have an incredible and unique photograph to be proud of. This workshop will include classroom instruction about the night sky, necessary camera equipment, camera settings, focusing at night, light painting, field techniques, and an overview of post-processing. After everyone is comfortable with the concepts of night photography the class will go into the park and practice new skills during a unique private evening at Keys Ranch. This class is **limited to 8 participants**, so sign up early!

This class is for photographers of all abilities that are new to night photography and light painting techniques. **Photographers must be able to work their camera in full manual mode, in the dark!**

For those who want to camp with Don after class, a group campsite will be provided by the Desert Institute. Once everyone is settled-in, we will wind down by having some snacks and drinks (BYO) around a picnic table. Don will answer any questions you have, look at your pictures from the night, and demo and discuss how the same techniques that you have practiced can be used to create star trails and time lapse videos.



Photo by Don Chambers

# Camping Programs

**SIGN UP ONLINE**  
Click On Class Name

There is no better way to explore Joshua Tree National Park than from a base camp in the reserved Lost Horse Campground which is located in a secluded rock canyon with a beautiful view of Lost Horse Valley. This is not backpacking, where you have to carry all of your camping needs on your back, but, rather "car camping." Car camping simply means that you load up all of your gear for the trip in your car, pull into your campsite, and set up your tent on a designated tent pad. This experience can be called "base camping" as well, just near your car, instead of say, a few thousand feet below Mt. Everest. When car camping, there's no hiking or backpacking involved in getting to your site, so the weight of your gear, or how much you pack, is of little concern as long as it all fits in your car. There's no need to skimp on any of the luxuries that will make your weekend comfy and unforgettable. That means you're free to pack an air mattress, 2 coolers worth of food and drinks, and a whole bunch of cast iron to cook over the coals. You are going to cook over coals, right? Good. If not, bring along a propane stove. If you don't have camping equipment, don't worry. Contact us for a list of local outfitters who will rent you the basic needs for your camping weekend.



view from Lost Horse Campground

## Women's "Get Away" Weekend

**Date/Time:** Saturday, April 21, 8 am - 5 pm  
Sunday, April 22, 8 am - 4 pm  
**Meet at:** Joshua Tree Visitor Center  
**Fee:** \$110 JTNPA member, \$120 non member  
**Instructors:** Pam Kersey, Camping and Hike Leader  
Robin Balch, Camping and Hike Leader  
**Hike Level:** Moderate



**NEW!**

## Springtime Camping in Joshua Tree National Park

**Date/Time:** Saturday, March 10, 8 am - 5 pm  
Sunday, March 11, 8 am - 4 pm  
**Meet at:** Joshua Tree Visitor Center  
**Fee:** \$110 JTNPA member, \$120 non member  
**Instructors:** Tom Scanlan, Camping and Hike Leader  
Pam Kersey, Camping and Hike Leader  
**Hike Level:** Moderate



If you have a taste for adventure, a thirst for wild spaces or just want to improve your outdoor skills, sign up here! Learn how to thrive in the outdoors with camping basics or refresh your current skills, improve your knowledge of natural science and have fun with a small group of other intrepid explorers of Joshua Tree National Park. On this weekend camping workshop you'll learn about the desert while hiking through it, share stories around a crackling campfire, and acquire useful skills that will transform the great outdoors into your own spectacular backyard. No prior camping experience is necessary, though some basic equipment is required. Camping equipment can be rented locally from outfitters. More experienced campers who'd like to brush up on their skills or just come to have a good time are also welcome. This weekend of classes will be held at Lost Horse Campground, a beautiful location that is perfect for this program!

Spend a weekend with the Desert Institute at Joshua Tree National Park where you can go to unplug, to get away, to learn new skills and to enjoy the company of other course participants. Trade in your computer, cell phone, Instagrams, clocks, schedules and workplace jargon for an off-the-grid weekend with the girls — two days of pure unadulterated fun and education! Join Pam and Robin learning about camping, camp cooking, hiking and enjoying Joshua Tree National Park. This weekend of classes will be held at Lost Horse Campground, a beautiful location that is perfect for this program!



photo by Fran Calvert

The Desert Institute offers a number of classes that have a camping "option" at Lost Horse Campground. It is a great location for our classes!

March 23 - 25	Fine Art Photography
April 28 - 29	Tracking in Joshua Tree National Park
August 11	Nightscape Photography classes



# Special Programs

If your group, large or small, is searching for a special Joshua Tree National Park experience tailored to your interests, the Desert Institute will design an educational class just for you. We'll insure that the activity level and optional field component will perfectly match your needs for one day or multi day excursions.

## ***Day with a Desert Naturalist***

Learn the secrets of Joshua Tree National Park in an all-day field class with a desert naturalist. Groups will explore the unique landscape of the park focusing on an area of interest to them. Common topics to be covered are: geology, cultural history, flora, and ecology found in the vast valleys, rock mazes, desert cactus gardens, and Joshua tree forests. Most programs cover eight miles at a moderate pace with uneven terrain and moderate elevation gain. A "sample" Day with a Desert Naturalist could include **Discover the Wonderland of Rocks**.

The Wonderland of Rocks is a large labyrinth of granite formations and meandering corridors. It's an easy place to get lost, but it's also full of secret, picture-postcard settings, panoramic vistas, and any number of natural surprises. Spend an enjoyable day hiking and scrambling through this rare place, feeling the rough texture of its timelessness underfoot and in the finger tips. More than just a day of outdoor adventure, this Desert Institute hike includes introductory instruction in how the Wonderland formed, why it looks the way it does, and how this unique environment helps support a diverse and interesting community of plants and animals. Come prepared to hike seven to ten miles, depending on conditions, with occasional stops for rest, lunch and teachable moments. The route is cross-country and requires some scrambling and rock-hopping, none of it extended or technical.



## ***Sunrise or Sunset Photographic Workshops with a Master Photographer***

Let us show you where and how to take stunning sunrise or sunset images in Joshua Tree National Park! We can create a customized program to spend four hours in the morning or evening photographing the iconic boulders and Joshua trees. This workshop is perfect for those photographers looking to improve on composition and creating unique and original imagery. Working with our instructors will help you make sense of the landscape and begin to understand how to make effective images in this truly bizarre and wonderful terrain. If you're just a beginner, no problem! This workshop will provide you with beginning instruction in landscape photography, filter use, and sunset or sunrise silhouettes.



Photo Credit: Dion Wong

### PROGRAM COST

1	6 people	Half Day	\$300
1	6 people	Full Day	\$500
7 + people			call

Rates effective through December 2018

# Joshua Tree National Park Association

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Your support is critical to maintaining the beauty and integrity of Joshua Tree National Park's unique ecosystems. The Joshua Tree National Park Association has been the park's non-profit cooperating partner since 1962, with a mission to assist with natural and cultural resource preservation and educational activities of Joshua Tree National Park. Programs and projects that cannot be achieved through federal funds and personnel are made possible through the Joshua Tree National Park Association. We offer several ways for friends of Joshua Tree National Park to get involved and make a valuable contribution toward preserving this national treasure for future generations.

## MEMBERSHIP

As a member of the Joshua Tree National Park Association, you will help the park achieve its education, interpretive and research goals. Your membership supports education materials for students, the park's library and historical collection, and scientific research.

Membership benefits include:

- 15% off merchandise at Joshua Tree National Park Association Visitor Center bookstores
- \$10 off Desert Institute classes
- Invitations to special events
- Reciprocal discounts at association bookstores at most other National Parks
- Membership sticker to show your support
- **Keys Views** newsletter

Additional premiums come with our appreciation for your support at Supporting, Patron, Contributing, Sustaining and Benefactor levels. Full details are available on our website and membership brochure, or by calling our office at 760-367-5535.

## VISITOR CENTER BOOKSTORES

Joshua Tree National Park Association operates bookstores in each of the Park's four Visitor Centers. Sales in our stores account for a significant portion of the Association's revenues, and our non-profit mission means that proceeds from our sales support natural and cultural resource preservation and educational activities of Joshua Tree National Park. Revenues from the very popular Legacy collection go directly to support the Legacy Fund.



Joshua Tree Visitor Center



Cottonwood Visitor Center



Oasis of Mara Visitor Center



Black Rock Visitor Center

# Desert Institute Instructors

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MISHA ASKREN is an outings leader for the Sierra Club and is an instructor in the Wilderness Travel Course. He leads trips that are "off-trail" in the wilderness in the Sierras, the San Gabriel Mountains and in Joshua Tree.

ROBIN BALCH, is a Desert Institute "lead" volunteer. She has hiked several portions of the Pacific Coast Trail and has been a Forest Service Fire Lookout. Her hiking and camping skills make her a great co-instructor for the Women's "Get-Away" Weekend.

KRISTIN H. BERRY, Ph.D., is Supervisory Research Wildlife Biologist at the Western Ecological Research Center of the United States Geological Survey, and current board member of the Desert Tortoise Council. Dr. Berry has published over fifty scientific journal articles about desert tortoises, as well as numerous technical reports, magazine articles and books. She has organized and instructed a great variety of scientific symposia and workshops, and made research presentations to many different professional groups such as the Desert Tortoise Council.

DAVID CHAPPELL, Ph.D., Astronomy, Associate Professor of Physics & Astronomy, University of La Verne, has taught astronomy and physics since 2000. Chappell's research interests include star formation, galaxy evolution, and computational astrophysics. His interest in archaeo-astronomy has led him to study in Mexico, Guatemala, Honduras, the Shetland Islands, and the Kingdom of Tonga.

DON CHAMBERS has been hiking, climbing and taking pictures in Joshua Tree and throughout the west for 45 years. His early interest in the outdoors led him to an M.S. in Geography. He was a naturalist in the Ancient Bristlecone Pine Forest for the USFS, taught geology of the National Parks at Valley College and Cal Poly, and for the last 38 years has been the manager of consulting services at Esri. Don is on the Board of Directors of the Eastern Sierra Interpretive Association that runs the Visitor Centers in Lone Pine, Bishop, Mammoth, Lee Vining, and the Ancient Bristlecone Pine Forest.

THERESA CLARK is a bryophyte ecologist from Maine, but much of her research has been in the American Southwest. She earned an M.S. at Northern Arizona University, studying the taxonomy and ecology of mosses in Grand Canyon National Park, AZ. Currently, she is working on her PhD at the University of Nevada, Las Vegas, under Dr. Lloyd Stark researching the ecophysiology of arid land moss survival in the face of a changing climate. The heart of her dissertation seeks to predict the capacity for desert mosses to "hide" from climate change in protected microhabitats. She is also working on the moss flora of Grand Staircase-Escalante National Monument, UT.

JANIS COMMENTZ is a southern California native who grew up near the coast and began drawing and painting early in life. As the daughter of an artist, she was surrounded by art materials and enjoyed trips to galleries and museums, as well as seasonal trips to Laguna Beach and Carmel. Janis moved to the Mojave Desert in 1977 to teach high school art and

English. At the University of Redlands, she earned a B.A. in art and English and studied with John Nava, well-known for his tapestries at the Cathedral of Our Lady of the Angels in Los Angeles. She holds an M.A. in Education from California State University at San Bernardino and teaches youth art classes at the 29 Palms Art Gallery and has facilitated life drawing in Joshua Tree for eight years.

KELLY CRAWFORD is the founder/CEO of Joshua Tree Excursions. He served honorably in the U.S. Army National Guard and the United States Marine Corps for 23 years. The bulk of his time in the service was spent with the USMC as an Explosive Ordnance Disposal (EOD) Technician. Kelly has travelled extensively around the world exploring and discovering the hidden wonders of our amazing environment. He lives by the motto that, "Life is a journey and not a destination." He possesses a wealth of leadership experience, is an avid outdoorsman and an expert in survival, navigation and backcountry expeditions.

PAUL DELEY obtained his Ph.D. in Invertebrate Zoology at Ghent University, Belgium in 1994 and moved to Riverside in 2000 to join the Department of Nematology at UCR as a faculty member. His research focuses on ecology, diversity and systematics of nematodes in arid ecosystems, using methods that combine light microscopy observations with DNA sequence analyses. His current teaching duties include annual upper division undergraduate courses at UCR on the subjects of Invertebrate Zoology and Biology of Nematodes, and his past teaching also included subjects such as Soil Ecology, Arthropod Diversity, and Theoretical Systematics. He is an avid nature photographer with particular interest in macro photography as a tool for exploring biodiversity of southern Californian deserts and ranges.

PAUL DELANEY, Ph.D., is a tenured professor of biology at Copper Mountain College in Joshua Tree. He is the USFWS-authorized tortoise biologist for the CMC translocation area, and has been monitoring the tortoise population at the 85 acre preserve on campus since 2007. A field biologist since 1977, Delaney has conducted zoological research in California, Mexico, Central America and the Caribbean, and published over two dozen scientific papers.

CRAIG FUCILE, B.A., Physical Geography, teaches photography for University of California, Riverside Extension. A long time instructor, Fucile has taught numerous photography workshops in western landscapes that he enjoys photographing including: Joshua Tree, Death Valley, Eastern Mojave, Owens Valley, Grand Canyon, Bryce Canyon, Anza-Borrego, Kings Canyon and Sequoia. He received the Fall 2010 Instructor Excellence Award from UC Riverside Extension and the 2007 Distinguished Instructor Award from UC Irvine Extension. Craig was a Fall 2017 Artist in Residence for Angeles National Forest and San Gabriel Mountains National Monument.



# Desert Institute Instructors

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ALESSANDRO GRIPPO, Ph.D., Geological Sciences, University of Southern California, has done research and taught geology, oceanography, stratigraphy, environmental geology and field classes at Santa Monica College and several California State University campuses. Alessandro has a keen interest for the geology of the American southwest and loves being out there exploring, learning and sharing his passion for Earth and its history.

MONICA GORMAN holds a Ph.D in Biology and a J.D. She has spent most of the last 20 years teaching a wide range of biology courses at colleges in the Bay Area and Los Angeles, although she took time off from teaching to earn her J.D., work as a biotechnology patent lawyer, and travel. She moved to Joshua Tree in 2011 and currently teaches at Los Angeles City College and the Twentynine Palms Marine Base. She is an avid desert enthusiast and spends most of her free time exploring and hiking in Joshua Tree National Park.

SCOTT L. HOFFMAN, M.S., is a wildlife biologist with the U.S. Fish and Wildlife Service. His passion for the conservation of the Mojave desert tortoise began as a field biologist, where he gained expertise in surveying, telemetry, animal husbandry, managing translocation, and conducting health assessments. His current work focuses on the management and recovery of federally-listed species, and involves collaboration with a broad spectrum of partners (from federal agencies to grassroots organizations) to develop and implement conservation priorities for many different species in our California deserts.

DE KARLEN is a naturalist, hiking and desert guide with Desert Adventures. Previously, De worked as an Interpretative Park Ranger in Yosemite National Park, so she truly enjoys sharing her knowledge about the wonders and processes of our natural world.

LANCE KEIMIG is a Vermont based photographer who is best known for night photography of the built environment. The second edition of his book, *Night Photography - Finding Your Way In The Dark*, was published by Focal Press, and has been translated into 7 languages. Keimig is a partner in National Parks at Night, an organization dedicated to promoting and preserving our national parks through photographic education.

PAM KERSEY, Ed.D., MSN, RN, is the Dean of Science, Math and Engineering and a Health Education Professor at Cuyamaca College in San Diego. She volunteers as an archaeological site steward, for the Desert Institute at Joshua Tree and has also volunteered as a camp nurse. She has camped, backpacked, and hiked for many years including summits over 14,000 feet 5 times. She has taught outdoor classes for women, and enjoys helping others learn how to safely appreciate camping and hiking.

TOR LACY, M.S., is a tenured instructor at Cerritos College teaching: Physical Geology, Introduction to Earth Science, Geology of the Western National Parks and Monuments, Natural History of Southern California and Field Methods of the Earth Sciences.

EDWARD LARUE, JR., M.S., specializes in California desert biota as field investigator and scientist for Circle Mountain Biological Consultants, Inc. In 2005 he authored the Copper Mountain College Habitat Conservation Plan (HCP), and in 2008, he implemented the federal and state permits for the HCP. In 2007 he organized and coordinated a multi-agency effort by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game, National Park Service (JTNP), BLM and San Bernardino County to establish a tortoise conservation area in the Morongo Basin. LaRue has received numerous awards for his conservation work with desert tortoises.

KURT LEUSCHNER, M.S., Wildlife Ecology, is a Professor of Natural Resources at College of the Desert. Leuschner's specialties include: ornithology, entomology, and desert ecology. He has led hundreds of field trips both locally and as far afield as Africa. He teaches natural history courses for the Bureau of Land Management, UCR Extension, the Desert Institute, the Living Desert, California State Parks, Riverside County Parks, and many other conservation organizations.

JIM LOWERY is a nationally known tracker and author of *The Tracker's Field Guide*. He has taught tracking to thousands of students, including many special trainings for field biologists, universities, naturalists, and park rangers. Some of his specialized field workshops have focused on tracking individual species including bighorn sheep, badgers, mountain lions, elk and black bears.

DENNIS MAMMANA, M.S., Astronomy, has delivered the wonder and mystery of the cosmos to audiences for more than four decades. A nationally syndicated astronomy columnist with Creators Syndicate and author of six books on popular astronomy, Mammana is also an accomplished night sky photographer. He is one of only six U.S. photographers invited to join TWAN—the World at Night—an international team of the most highly-acclaimed sky photographers on the planet. Mammana shoots the heavens from around the world, but mostly from his desert home in Borrego Springs.

DANIEL MCCARTHY, M.S., Anthropology, has worked at Anza-Borrego Desert State Park, Joshua Tree National Park, and throughout southern California compiling photographic inventories of the rock art of this region. His research interests include desert archaeology, aboriginal trail systems, and rock art. McCarthy also conducts southern California Native American cultural awareness classes providing information about native plant uses, rock art, and material culture.

RALPH NORDSTROM's philosophy on photographic workshops is simple: they are successful when the attendees return home with a few great photographs and feeling that they have expanded what he likes to call their "Creative Vocabulary"; that is, their ability to express themselves through their photography. Explore his gallery at [ralphnordstromphotography.com](http://ralphnordstromphotography.com).

# Desert Institute Instructors

NICOLE PIETRASIAK received her Ph.D. in the Soil and Water Program at UC Riverside. She is an Assistant Professor for Environmental Soil Microbiology, Plant & Environmental Sciences Department, New Mexico State University. Her research interests include soil science, botany, algal biodiversity, and desert ecology. Nicole has conducted extensive research on cryptobiotic crusts across the western U.S. and has made major contributions to the study of abundance, distribution, and diversity of cryptobiotic crusts at Joshua Tree National Park.

KEVIN POWELL was intrigued at an early age by the quiet complexity of this desert playground. Local author and photographer, Kevin Powell has spent forty-four years hiking, rock climbing, photographing and exploring within Joshua Tree National Park. His first book, *Classic Day Hikes of Joshua Tree Park*, is available at the Joshua Tree Visitor Centers.

TED REEVES, B.A., Biology taught science at Chaffey High School in Ontario, CA for 37 years. He has led field trips in southern California, Yosemite, Yellowstone, the Tetons, Grand Canyon and Hawaii. He is presently teaching for University of the Pacific and believes that a relevant Natural History class requires an outdoor experience.

TOM SCANLAN is a telecommunications professional and a part-time college educator. He loves the outdoors and has ten years of experience as a Boy Scout leader. As a hiking enthusiast he has climbed Mount Whitney twice. He has taught others of all ages how to backpack, camp and hike. Tom is an active volunteer archaeological site steward for the Joshua Tree National Park and the Cleveland National Forest and for the Desert Institute.

ALLAN SCHOENHERR, Ph.D., Professor of Ecology Emeritus, Fullerton College, is an expert on California flora and fauna, as exemplified by two major books he has authored, *A Natural History of California* and *A Natural History of the Islands of California*. Schoenherr has been doing research, traveling, and photographing the southwestern desert for many years. In addition to teaching ecology at several universities, he has led many field courses throughout the deserts of California.

DARRELL SHADE is a retired high school teacher and recognized botanist/desert naturalist for Joshua Tree National Park. Shade has a deep love for the desert and its enormous variety of plant and animal life as well as being a master teacher. He has worked closely with Joshua Tree National Park botanists over the last 20 years and keeps up on all the new floral discoveries being made in the park.

D.D. "DEE" TRENT received his undergraduate degree in geology from the University of Southern California and his Ph.D. from the University of Arizona. Now semi-retired, he taught geology, physical oceanography and physics for 28 years at Citrus College, Glendora, CA, part of which time he was also an Adjunct Professor at USC teaching Field Geology. He is author of *Mines and Geology of the Randsburg Area: An Historical Gem of the Mojave Desert*, a co-author of a widely used college textbook, *Geology and the Environment*, now in its 7th edition and co-author of *Joshua Tree National Park Geology*.

MICHAEL VAMSTAD, M.S., Ecology, Evolution and Organismal Biology began working at Joshua Tree National Park as a restoration ecologist in 2004, and transitioned to wildlife ecologist in 2007. He received his undergraduate degree in field biology and for eight years worked on many bird research projects in California, Arizona, Rhode Island, Guam and Baja California, Mexico. While working for JTNP, he attended graduate school at the University of California, Riverside. In 2009, Michael received his M.S. in Ecology with a thesis on small mammal and vegetation responses from wildfire.

SANDI WHEATON is a freelance tour director and photography instructor based in Canada. After being downsized from General Motors in 2009, she took a life-changing drive across America on historic Route 66, creating three photography projects and an award-winning travel blog. One of Sandi's greatest passions and long-term photography projects is the ecologically-troubled Salton Sea in southern California. She has been visiting and photographing the Salton Sea since 2004, sharing the work through several solo exhibitions over the years. A true globetrotter, Sandi leads week-long photography tours in Iceland and California, has taught Forensic Photography at the University of Windsor, and teaches "Moviemaking Made Fun" on a cruise ship.



All Desert Institute programs have been reviewed by the NPS for potential environmental impacts and approved as being compliant with National Park standards.

# Class Registration Form

You may register for a course by phone, fax, mail, or online at [joshuatree.org](http://joshuatree.org). Before participating in any of the field activities provided by the Desert Institute, and as a condition to being accepted for such activities, you must sign, for yourself and, if applicable, for your minor child who is a participant, a waiver and release of claims, including of negligence, arising from your or the minor's enrollment or participation.

NAME(S) \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP CODE \_\_\_\_\_

PHONE \_\_\_\_\_ CELL PHONE \_\_\_\_\_

EMAIL ADDRESS \_\_\_\_\_

- ☐ Check here if you would like to receive Desert Institute information and updates on merchandise, lectures, classes, and custom-designed programming via email. We do not share your contact information without your prior approval.

## Membership Information

**Current** JTNPA/PINE/OSHER membership qualifies me for a \$10 discount on every Desert Institute class

- ☐ I am a current member of JTNPA!  
☐ I would like to renew my membership or join  
☐ I am a member of a PINE or OSHER organization

\_\_\_\_\_ (please fill in organization name, see page 25 for PINE list)

DATE	CLASS NAME	FEE	CREDIT FEE	TOTAL

**Make checks payable to: Joshua Tree National Park Association  
 74485 National Park Dr., Twentynine Palms, CA, 92277**

Membership  
 Fee (Optional)

\$25

Total Enclosed

How did you hear about us? \_\_\_\_\_

PAYMENT BY: ☐ CHECK ☐ AMERICAN EXPRESS ☐ DISCOVER ☐ MASTERCARD ☐ VISA

Name on Credit Card \_\_\_\_\_ Security V-Code \_\_\_\_\_

Credit Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Authorized Signature \_\_\_\_\_



# General Information

## REGISTRATION

You may register by phone, fax, mail, or on-line at [joshuatree.org](http://joshuatree.org). Please register early, our classes have limited sizes. You may also register using the registration form found on page 24.

## COURSE INFORMATION PACKET

Upon receipt of your registration, we will send you a course itinerary, map, enrollment confirmation/entrance fee waiver, and information on clothing and equipment needs. Local lodging and camping information is available upon request.

## CANCELLATION POLICY

If you need to cancel, notify us at least seven days prior to the start of the course and we will process your request minus a **\$25** cancellation fee. **No refunds, transfers, or credits will be granted if cancellation occurs within the seven day period.** Please note that we cannot make any exceptions to this refund policy for any reason, including but not limited to medical reasons, illness, travel delays, personal situations, emergencies, or weather. This program depends on registration for its funding. While inconvenient, please understand that this policy enables us to sustain our programs even with last minute cancellations.

## WAIVER AND RELEASE OF CLAIMS

Before participating in any of the field activities provided by the Desert Institute, and as a condition to being accepted for such activities, you must sign, for yourself and for your minor child who is a participant, a waiver and release of claims, including of negligence, arising from your or the minor's enrollment or participation. Your information is confidential. Participants must provide their own health and accident insurance. Please obtain a doctor's clearance if you have any condition that may impact your ability to participate in a class.

## DISCOUNTS

There is a \$10 discount per class for **JTNPA, OSHER or PINE members**, including those who join when they register. PINE organizations are listed on this page. Discounts may not be combined.

## SAFETY, INSURANCE AND PHYSICAL FITNESS

Every effort is made to ensure safety on Desert Institute courses. However, participants are responsible for their own safety and accident insurance. JTNPA does not accept responsibility for lost, stolen, or damaged property or any bodily injury incurred during the courses. You must sign a liability waiver in order to participate in the courses. Participants must be in good physical condition for courses/activities in a desert that may be hot, dry, windy, and sometimes surprisingly cold.

## CHILDREN AND PETS

Our courses are designed for adults. An adult must accompany children under 16; the minimum age is 14. Pets are not permitted on courses, on National Park trails, or unattended in vehicles.

## ACADEMIC CREDIT

Credit is available from University of California, Riverside Extension. Optional credit courses are marked by the symbol found on page 3. The number of units are listed with each class. Credit fees are listed separately from noncredit fees. Credit units are based on a quarter system. Credit students may be required to successfully complete assignments or exams. Teachers may apply for Professional Career Development through their school district.

## CAMPING AND PARK INFORMATION

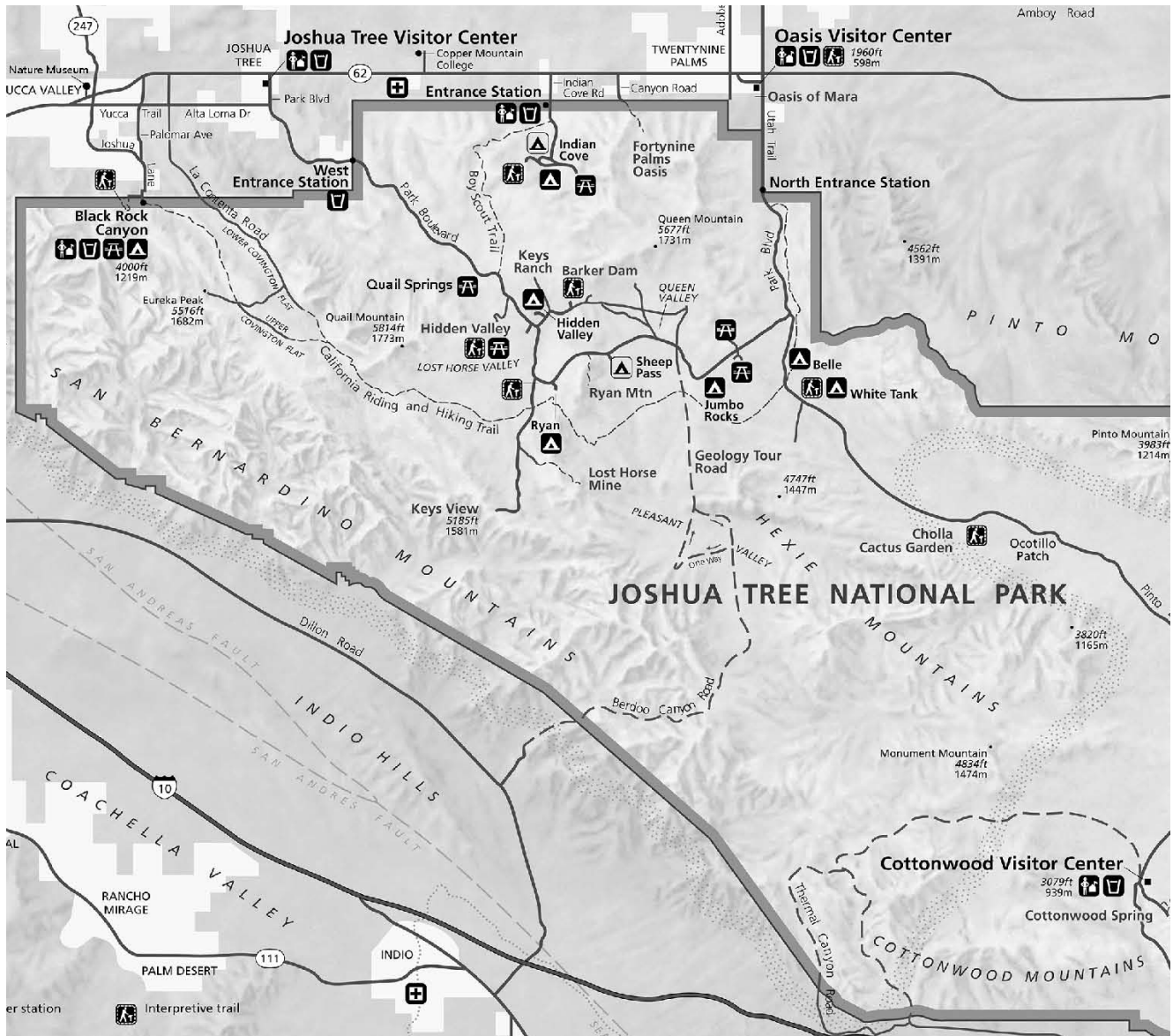
Most campgrounds are first come, first served. Reservations are available for Black Rock and Indian Cove from October through May. Camping and fees for overnight courses held at Lost Horse Campground are included in registration. For other courses campsites may be reserved online through [recreation.gov](http://recreation.gov), by calling 877-444-6777, or through the Desert Institute at 760-367-5535. Campground fees will apply. Participants are responsible for their own accommodations and food. Visit the park website at [nps.gov/jotr](http://nps.gov/jotr) or the JTNPA website at [joshuatree.org](http://joshuatree.org) for more camping information.

## WEATHER, CLOTHING, AND EQUIPMENT

Courses are held rain or shine. We reserve the right to change the course itinerary due to weather or other conditions. Students should be prepared for a variety of desert weather conditions, including cold and windy days. Appropriate clothing, footwear, and sun protection are very important. Clothing and equipment needs will be identified in your course information packet. Be prepared - bring plenty of water!

## Partners In Nature Education

Anza Borrego Desert Natural History Association  
Desert Institute at Joshua Tree National Park  
Hidden Valley Wildlife Area  
Hi Desert Nature Museum  
Idyllwild Nature Center  
Natural Science Collaborative of the Desert Region  
Rancho Santa Ana Botanic Garden  
Rim of the World Interpretive Association  
Riverside Corona Resource Conservation District  
San Bernardino County Museum Association  
San Bernardino National Forest Association  
San Bernardino Valley Audubon Society  
San Geronio Wilderness Association  
Sierra Club, San Geronio Chapter  
Theodore Payne Foundation for Wild Flowers and Native Plants  
Volunteers of the Angeles National Forest



**From Los Angeles:** Take Interstate 10 East to Highway 62 to Yucca Valley, Joshua Tree or Twentynine Palms. You may enter Joshua Tree National Park through the North Entrance, Utah Trail, Twentynine Palms (south from 62); West Entrance, Park Blvd., Joshua Tree (south from 62); or the South Entrance at Cottonwood (take Interstate 10, Exit 168 north).

**Big Morongo Canyon Preserve,** Morongo Valley. Turn southeast off Highway 62 onto East Drive. Turn left into the Preserve.

**Black Rock Visitor Center,** at Black Rock Canyon Campground, Yucca Valley. From Highway 62, take Joshua Lane going south, right turn at intersection onto San Marino Drive; turn left onto Black Rock Canyon Road; turn right into the visitor center parking lot.

**Cottonwood Visitor Center.** Take Exit 168 north off Interstate 10 and turn right into the visitor center parking lot.

**Copper Mountain College,** Joshua Tree. From Highway 62, take Rotary Way north and turn left into college parking lot.

**Joshua Tree Visitor Center,** Joshua Tree. From Highway 62, take Park Blvd. south and turn right into visitor center.

**Oasis Visitor Center,** Twentynine Palms. Turn south off Highway 62 onto National Park Drive and turn right into visitor center.

**Pilot Travel Center,** North Palm Springs. From Interstate 10 take exit 120 south and turn left into Pilot Travel Center parking lot.

**Travel directions to other class locations can be found in the downloadable course outline for each class on our website.**



Many of our multi-day classes offer a camping option with the instructor and other participants. Look for the ▲ icon to take advantage of this option. If you would prefer to stay in a convenient motel or a bed and breakfast, please contact us for a complete list of lodging in the Joshua Tree Gateway Communities.



Photo by Richard Arnold

### **Volunteer Opportunities**

Combine your passion for the Joshua Tree National Park and education by joining the Desert Institute volunteer team.

We are recruiting candidates for the following program:

**Field Class Representatives - training to be held on**

**JANUARY 26 - 28, 2018**

Please call 760-367-5539 for more information on volunteer programs with the Desert Institute.





**Desert Institute at Joshua Tree National Park**  
**74485 National Park Dr.**  
**Twentynine Palms, CA 92277**  
**760-367-5535**  
**joshuatree.org**

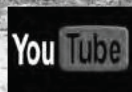
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29 PALMS, CA

Address Service Requested

The Joshua Tree National Park Association is a not-for-profit organization formed to assist with preservation, education, historical and scientific programs for the benefit of Joshua Tree National Park and its visitors.



**Join The Adventure**



**Follow us and share images and ideas!**

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