

Desert Institute

at Joshua Tree National Park



Course Catalog Spring 2020



Welcome to Desert Institute at Joshua Tree National Park

This has been an exciting year for the Desert Institute as we celebrated twenty years of providing quality outdoor environmental education in Joshua Tree National Park and beyond! For the first time, we conducted a geology class in Death Valley National Park, which was an overwhelming success. In addition, we held our first class at the Desert Studies Center at Soda Springs in the Mojave National Preserve. This location allows for greater exploration into the northern Mojave desert with overnight accommodations, meals, and equally important, gasoline at nearby Baker, for extended forays. Two more classes at the Desert Studies Center have been scheduled for the spring including "Birds of the Eastern Mojave, Spring Migration" and "Insects and Arthropods of the Eastern Mojave". Both classes earn college credit through UC Riverside Extension and this is also our twentieth anniversary working with UC Riverside Extension providing college level curriculum. You will also find that we are now starting our "Spring" season in January and running through to the middle of May. There are now 43 exciting classes to choose from.

With such longevity in our programming, we are sad to see our long time instructor, D.D. "Dee" Trent, leave us after the upcoming March class "Rocks and Minerals of Joshua Tree National Park". Dee's first class with us was in 2001 and he taught "Geology: Creation of the Joshua Tree Landscape". So, if you want to learn from a great geologist, instructor and friend of the Desert Institute, don't hesitate to enroll now!

Kevin Wong
Director, Desert Institute at Joshua Tree National Park



Kevin Wong, receiving the 2019 Cultural Contributor Award at the Basin Wide Foundation annual gala with David Smith, park superintendent, and Dawn Rowe, San Bernardino County Board of Supervisors.

Spring 2020 Calendar

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* Offered for university credit

CAMPING OPTION

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 **760-367-5537**.

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: 760-367-5537

Email: desertinstitute@joshuatree.org

On-line: 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.



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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.

NEW!

How Not to Get Lost and a Moonlight Hike

Date/Time: Saturday, March 7, 3:30 pm - 8 pm
Meet at: Oasis Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Amanda Lopez, Desert Institute Staff
Hike Level: Moderate



The ultimate goal of survival training is to prevent survival situations from occurring in the first place. However, when survival is unavoidable, mindset, skills and improvisation are key. Learn the essential considerations 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 thought processes, skills and knowledge needed to survive in desert regions and the hazards associated with desert travel.

After a 1.5 hour presentation on desert survival, we will have a dinner break. After the dinner break, we will travel into the park to the trail head where we will hike under a moon. The hike is approximately 2 miles round trip.

Inner and Outer Landscape Retreat

NEW!

Date/Time: Saturday, March 21, 9 am - 4 pm
Sunday, March 22, 8 am - 4 pm
Meet at: Joshua Tree Visitor Center
Fee: \$120 JTNPA member, \$130 non member
Instructors: Caryn Davidson and Charlotte Burns
Hike Level: Easy



Immerse yourself in the park's spectacular landscape as you hike through it with two experienced desert naturalists. Discover the park's cultural history as you gain a better understanding of the human habitation patterns within the park's boundaries, learn how the landscape has shaped these people's lives, and how humans have changed the landscape over time. There will also be opportunities for reflection as we incorporate morning and evening yoga sessions into the experience, as well as time to write poetry or prose based on our observations. Writing prompts will be provided. Disconnect from the usual gadgetry and spend a weekend attuning your senses to both the magnificent landscape of the Wonderland of Rocks and the internal experience of discovering what arises as you explore the park. This program will be conducted at the Lost Horse Campsite. Camping fees are included.

“How-To” Navigate with Map and Compass

Date/Time: Saturday, March 22, 8 am - 4 pm
Sunday, March 23, 8 am - 1 pm
Meet at: Black Rock Nature Center
Fee: \$95 JTNPA member, \$105 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.

Wilderness Cooking School: Campsite Cooking

NEW!

Date/Time: Saturday, April 18, 8 am - midnight
Sunday, April 19, 7:30 - 2 pm
Meet at: Joshua Tree Visitor Center
Fee: \$180 JTNPA member, \$190 non member
Instructors: Alexis Grinbold, Campfire Cuisine Instructor
Scott Klinger, Photography Instructor
Hike Level: Easy



Have you ever noticed that when you are out in the wilderness, everything tastes better? Back in the days of the Wild West, Dutch ovens were like gold. They were that important. Nowadays, the mere thought of trying to survive in the wild sends shivers down people's spines. The thing is, pretty much anything you make at home in the traditional oven and on the stovetop can be made in the wild in a Dutch oven. Bread? No problem. Pie? Absolutely. Stew? A no-brainer. The curriculum includes lessons on meal planning and culinary techniques with an emphasis on cast iron, campfire and propane stove/oven cooking. You will also learn basic baking, grilling and survival food preparation skills. Meal ingredients for Saturday dinner, Sunday breakfast and Sunday lunch are included in the course fee. Learn how rewarding it is to cook in the refreshing air of Joshua Tree Park. After dinner, professional photographer Scott Klinger will cover the basics of night photography to enable you to document your campfire creations

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 13, 6 pm - 8:30 pm
Saturday, March 14, 8 am - 5 pm
Sunday, March 15, 8 am - 1 pm
Meet at: Black Rock Canyon Nature Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$245 JTNPA member, \$255 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.

Rocks and Minerals of Joshua Tree National Park

(Geosciences x425.1, 1.5 units)

Date/Time: Friday, March 20, 6 pm - 9 pm
Saturday, March 21, 8 am - 5 pm
Sunday, March 22, 8 am - 4 pm
Meet at: Oasis Visitor Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$245 JTNPA member, \$255 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.

Mosses In Motion:

Desert Moss Ecology and Diversity

(Biology XTBD, 1 unit)

Date/Time: Saturday, March 14, 9 am - 5 pm
Sunday, March 15, 9 am - 4 pm
Meet at: Oasis Visitor Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$220 JTNPA member, \$230 non member
Instructors: Theresa Clark, Ph.D. Biological Sciences
Hike Level: Moderate

NEW!



Moss in the desert? Why yes! Come learn the many important roles mosses play in desert ecosystems! This introductory course will familiarize students to this mysterious and beautiful group of tiny, overlooked plants with the resiliency to survive most of the year dry and dormant! We will use microscopes to learn what features (macro & microscopic) define mosses evolutionarily and how to distinguish them from commonly confused lichens, algae, ferns, and low-lying herbs. A "Mosses in Motion" hydration activity will teach students the unique adaptive relationship of mosses to water and how this compares to the survival strategies of other desert plants. In the field, students will become keen "moss hunters" gaining first-hand experience with mosses on rock, soil, and riparian areas in the Mojave Desert. Students will learn to differentiate moss from the "other tinies" encountered, such as lichens while characterizing the protective features of microhabitats and how they may help shelter mosses from the brunt of future climate change.

Wildflower Wanderings

Date/Time: Saturday, March 7, 9 am - 4 pm
Meet at: Oasis Visitor Center
Fee: \$70 JTNPA member, \$80 non member
Instructor: Darrell Shade, Botanist, Desert Naturalist
Hike Level: Easy/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.

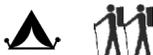
This class will repeat again on **Saturday, April 4** with the same times. The focus of this class will be on higher elevation plants. Please be sure to enroll in the correct class date!

SIGN UP ONLINE
Click On Class Name

Natural Science Courses

Geology of the Mojave National Preserve

Date/Time: Saturday, March 14, 9 am - 5 pm
Sunday, March 15, 9 am - 4 pm
Meet at: Hole in the Wall Campground, MNP
Fee: \$130 JTNPA member, \$140 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.**

Desert Tortoise Conservation Biology

(Biology x412.18, 1 unit)

Date/Time: Saturday, March 21, 8 am - 6 pm
Meet at: Copper Mountain College, Joshua Tree
Noncredit Fee: \$85 JTNPA member, \$95 non member
Credit Fee: \$150 JTNPA member, \$160 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.

Teachers

Credit courses meet the professional development needs of educators for career and salary advancement. Course credit is offered through UC Riverside Extension.

Rocks and Minerals of JTNP	1.5 units
Flora of Joshua Tree National Park	1.5 units
Desert Tortoise Conservation Biology	1 unit
Ecology of Joshua Tree National Park	1.5 units
Phenological Monitoring in JTNP	1 unit
Desert Moss Ecology and Diversity	1 unit
Birds of the Eastern Mojave	2 units
Insects and Arthropods of the Eastern Mojave	2 units
STEAM Creativity Inspired by Joshua Tree National Park	2 units
Demystifying the Park: Student Agency and Joshua Tree National Park	2 units



Ecology of Joshua Tree National Park

(Biology x412.4, 2 units)

Date/Time: Saturday, March 28, 8 am - 5 pm
Sunday, March 29, 7:45 am - 4:45 pm
Meet at: Oasis Visitor Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$275 JTNPA member, \$285 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.

Natural Science Courses

SIGN UP ONLINE
Click On Class Name

Protecting Desert Watersheds at the Wildlands Conservancy's Desert Preserves

Date/Time: Saturday, March 28, 8:30 am - 2 pm
Sunday, March 29, 8:30 am - 2 pm
Meet at: Pioneertown Mountains Preserve
Fee: \$90 JTNPA member, \$100 non member
Instructor: Caroline Conway, Former Director of Education, Desert Preserves
Hike Level: Moderate - 6.5 miles round trip



The Wildlands Conservancy's three Desert Preserves protect watersheds essential to water supply and delivery to the surrounding deserts. Join us to visit all three preserves with a focus on the watersheds they protect and how watersheds both past and present are essential to the desert system. We will explore the canyons' roles as water delivery systems, wildlife corridors and habitats. This two-day class will include a 6.5 mile easy to moderate hike between Mission Creek and Whitewater Preserves on Sunday. Preserve staff will help us understand the particular concerns of each preserve.



Mammal Tracking in Joshua Tree National Park

Date/Time: Saturday, April 4, 8:15 am - 5:30 pm
Sunday, April 5, 8:30 am - 2 pm
Meet at: Joshua Tree Visitor Center
Fee: \$145 JTNPA member, \$155 non member
Instructor: Jim Lowery, Primitive Skills Teacher, Author of *The Tracker's Field Guide*
Hike Level: Easy



Join Jim Lowery to learn and refine fundamental tracking skills. This class will explore the natural world through animal tracking, sign identification, and awareness techniques. Lowery will explain how to translate patterns found in the desert sand into animal stories. This class will be entirely field-based in order to provide abundant "dirt time" focusing on following trails, interpreting tracks and signs and even learning to read mood and body language of desert animals through their trails. Wildlife behavior, biology, and ecological relationships will also be examined by investigating the signs animals leave behind.

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

Desert Night Sky: Planets to Galaxies

Date/Time: Saturday, April 25, 2 pm - 10 pm
Meet at: Oasis Visitor Center
Fee: \$85 JTNPA member, \$95 non member
Instructor: David Chappell, Ph.D., Astronomy, Professor, University of LaVerne
Hike Level: Easy



Warm April 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, Professor of Astronomy and Physics at the University of La Verne, will lead participants on a tour of the heavens starting with the planets and ending with distant galaxies during this one-day field class. 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 Joshua Tree National Park to observe the night sky. Telescopes and binoculars will be used to see planets, star clusters, dozens of galaxies, and more. Don't miss this great opportunity to discover the universe that surrounds us!

Geology of the Marble Mountains

Date/Time: Saturday, April 25, 9 am - 3 pm
Meet at: Roy's Cafe and Gas Station, Amboy
Fee: \$85 JTNPA member, \$95 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 unit, 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.

SIGN UP ONLINE
Click On Class Name

Natural Science Courses

Birds of Joshua Tree National Park

(Biology x404, 1 unit)

Date/Time: Friday, May 1, 6 pm - 8 pm
Saturday, May 2, 7:30 am - 4:30 pm
Sunday, May 3, 7:15 am - 1:15 pm
Meet at: Black Rock Nature Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$210 JTNPA member, \$220 non member
Instructor: Kurt Leuschner, M. S., Wildlife Ecology
Hike Level: Easy/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.

NEW!

Birds of the Eastern Mojave, Spring Migration

(Biology x404.21, 2 units)

Date/Time: Friday, May 8, 7:30 pm - 9:30 pm
Saturday, May 9, 7:30 am - 4:30 pm
Sunday, May 10, 7:30 am - 12:30 pm
Meet at: Desert Studies Center, Zzyzx
Noncredit Fee: \$255 JTNPA member, \$265 non member
Credit Fee: \$385 JTNPA member, \$395 non member
Instructor: Kurt Leuschner, M. S., Wildlife Ecology
Hike Level: Easy/Moderate



Oases in the Mojave Desert are used by a wide variety of bird species every fall as stopping points during their southward migration. You will be amazed by the numbers and kinds of species we will encounter at this time of year. Beginning on Friday evening we will examine the important role of these stopover areas in the conservation of neotropical migrant birds and learn the techniques used to identify the common families of birds found in the vicinity of the Desert Studies Center. After slides and a brief lecture we will take a short night hike to look for nocturnal species. On Saturday we will travel by car to nearby sites in Death Valley, Tecopa, Baker, and Soda Springs that serve as migrant "traps." Some of these sites are marshes and others are merely small islands of green in a sea of desert. As we observe both migrant and resident birds in their natural habitats, we will learn about their ecology, natural history and special adaptations to the harsh desert environment. Sunday's activities will center around the Desert Studies Center where over 240 bird species have already been recorded.

Citizen Science: Phenological Monitoring in JTNP

(Biology x413, 1 unit)

Date/Time: Saturday, May 9, 6 pm - 8 pm
Sunday, May 10, 8 am - 5 pm
Meet at: Black Rock Nature Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$210 JTNPA member, \$220 non member
Instructor: Monica Gorman, Ph.D., Biology, Professor, Los Angeles City College
Hike Level: Moderate/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 evening 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!

NEW!

Insects and Arthropods of the Eastern Mojave

(Entomology x405, 2 units)

Date/Time: Friday, May 15, 7:30 pm - 9:30 pm
Saturday, May 16, 7:30 am - 4:30 pm
Sunday, May 17, 7:30am - 12:30pm
Meet at: Desert Studies Center, Zzyzx
Noncredit Fee: \$255 JTNPA member, \$265 non member
Credit Fee: \$385 JTNPA member, \$395 non member
Instructor: Kurt Leuschner, M. S., Wildlife Ecology
Hike Level: Easy/Moderate



In this course, students will learn about the basic anatomy of insects, and how to tell them apart from other desert arthropods. We will also review the many insect orders and families found in the East Mojave Desert region. Mimicry, the use of pheromones, fluorescence, and other important survival traits will be discussed. We will spend time in the field to observe diurnal (day active) insects and examine them up close, using a variety of different catch-and-release collecting methods such as pit traps, light traps, and aerial nets. As we walk around the Desert Studies Center and explore a local Joshua Tree ecosystem during a Saturday field trip, we will examine the different habitats and behaviors of insects that we encounter and discuss the various adaptations that enable insects to survive in this harsh desert environment. After dark we will move outside and examine insects that are attracted to the lights that we set up earlier. Ultraviolet lights and mercury vapor lamps will be used on the border of two different habitats: riparian and desert.

Joshua Tree Master Naturalist Certificate

IF YOU LOVE observing nature and learning about Joshua Tree National Park, expand your knowledge through the Joshua Tree Master Naturalist Series. 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 observation skills that are the hallmark of a good naturalist. When you complete eight courses, of your choice, you will receive your "Joshua Tree Master Naturalist" certification. Certification may be completed over time. These courses are approved for credit from UC Riverside Extension, but credit is not required for the certificate.

Complete eight courses to receive your Joshua Tree Master Naturalist certification.

<i>Course Name</i>	<i>Spring</i>	<i>Fall</i>	<i>Comment</i>
Biological Soil Crusts in Joshua Tree National Park		✓	
Birds of Joshua Tree National Park	✓		
Birds of the Eastern Mojave: Spring Migration	✓		New in 2020
Citizen Science: Phenological Monitoring in Joshua Tree National Park		✓	
Citizen Science: Post-fire Restoration Monitoring in Joshua Tree National Park			Not Available
Desert Invertebrates: Diversity Great and Small - a Macro Photography and Microscopy Primer		✓	
Desert Snakes: Mystery and Intrigue		✓	
Desert Tortoise Conservation Biology	✓		
Ecology of Joshua Tree National Park	✓		
Flora of Joshua Tree National Park	✓		
Geology and Geomorphology of Death Valley		✓	
Geology: Creation of the Joshua Tree Landscape		✓	
Insects and Arthropods of the Desert	✓		New in 2020
Insects and Arthropods of the Morongo Basin		✓	
Moss in Motion: Desert Moss Ecology and Diversity	✓		New in 2020
Rocks and Minerals of Joshua Tree National Park	✓		

SIGN UP ONLINE
Click On Class Name

Cultural History Courses

Rock Art of Southern California: From Palms to Pines

Date/Time: Sunday, February 16, 8 am - 6 pm
Meet at: Pilot Travel Center, North Palm Springs
Fee: \$85 JTNPA member, \$95 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.

History and Legends of the Joshua Tree Music Scene

NEW!

Date/Time: Saturday, February 29, 10 am - 5 pm
Meet at: Black Rock Nature Center, Yucca Valley
Fee: \$150 JTNPA member, \$160 non member
Instructor: Bruce Fessier, 40-year Desert Sun music writer and Instructor, UC Riverside
Hike Level: Easy



Bruce Fessier first visited the Twentynine Palms Inn at one-month old in 1953 and his family has owned a house in Joshua Tree since 1958. He's chronicled the Joshua Tree music scene since 1981, when he moved there in hopes of meeting the town's most famous resident, the English troubadour, Donovan. In his class, Bruce will explore the music scene's origins and share stories of how psychedelic experiences in the high desert not only shaped pop culture, but led to a vibrant scene including music festivals, famous recording sessions and a lounge named after Donovan's 2004 LP, "Beat Café," where an open mic night was heard internationally via Internet radio, inspiring a documentary of the influential but seemingly invisible Joshua Tree music scene titled "Nowhere Now." In addition to the story-telling, Bruce will share a playlist of music recorded by integral participants in the Joshua Tree music scene and lead a caravan car tour of important sites, including the home of the Joshua Tree Music Festival, the hotel where Parsons died and Donovan stayed, and a studio where the high desert sound was recorded.

Intaglios Along the Colorado River

Date/Time: Sunday, March 8, 7:30 am - 6 pm Oasis
Meet at: Visitor Center
Fee: \$85 JTNPA member, \$95 non member
Instructor: Daniel McCarthy, M.S., Anthropology
Hike Level: Easy/Moderate



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 15, 9 am - 4 pm
Meet at: Big Morongo Canyon Preserve
Fee: \$85 JTNPA member, \$95 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.

Teacher Development Workshops

SIGN UP ONLINE
Click On Class Name

Steam Creativity Inspired by Joshua Tree National Park

(Educ X441, 2 units)

Date/Time: Friday, April 24, 6 pm – 9 pm
Saturday, April 25, 9 am – 5 pm
Sunday, April 26, 9 am – 1 pm
Meet At: Black Rock Nature Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$275 JTNPA member, \$285 non member
Instructors: Mary Borobia Walls
Linda Braatz Brown

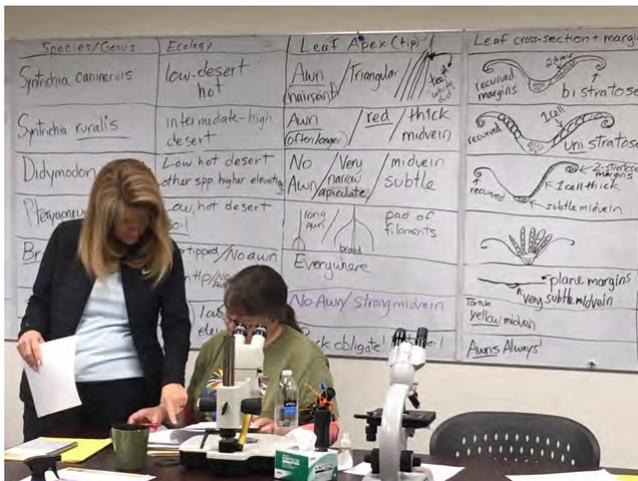
The natural world has been perfecting materials, structures, and shapes for billions of years. Wherever there is life, there are organic structures that help with survival and efficiency. There is so much to learn from these engineering marvels. The structures and patterns in all that can be found at the Joshua Tree National Park is a boundless source for creative inspiration. This hands-on class will explore how, if you take the time to look, the natural world offers creative ideas that can spark human ingenuity. Participants will walk away with concrete ideas to take back to their K-12 classrooms. In addition, participants will develop and discuss connections to the Next Generation Science Standards, Common Core State Standards, and California's Environmental Principles & Concepts through a learning sequence plan.

Demystifying the Park: Student Agency and Joshua Tree National Park

(Educ X442, 2 units)

Date/Time: Friday, May 15, 6 pm – 9 pm
Saturday, May 16, 9 am – 5 pm
Sunday, May 17, 9 am – 1 pm
Meet At: Black Rock Nature Center
Noncredit Fee: \$145 JTNPA member, \$155 non member
Credit Fee: \$275 JTNPA member, \$285 non member
Instructors: Mary Borobia Walls
Jennifer May

National Parks provide an ideal context for engaging K-12 students into doing science at a Park, on a school site, or in a community. Using the backdrop of the natural phenomena found in the Joshua Tree National Park, participants will experience ways to craft learning experiences that support the Next Generation Science Standards, California's Environmental Principles & Concepts, as well as other required state standards (CCSS). The methods used will expose participants to place-based and inquiry learning in ways that support learner agency and informed action. By the end of the three-day class, participants will plan and share a learning sequence that will be specific to their own grade level and content needs.



A review from our inaugural Teacher Development Workshop, "Demystifying the Park: Student Agency and Joshua Tree National Park":

Every element in this one was strong and engaging for all 3 days!! I have been teaching science for over 30 years and this training was definitely in the top 5 of the hundreds of trainings I've done over the years. The standards connections were right on, the interactivenss of this was a major strength, where we worked in teams inside and outside!! The whole training had a smooth flow that kept us engaged the whole time.

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 newfound 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!

SIGN UP ONLINE
Click On Class Name

Hikes With A Naturalist

Explore the Pinto Basin Sand Dunes

Date/Time: Saturday, February 22, 8 am - noon
Meet at: Oasis Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Kevin Powell, Author, Photographer
Hike Level: Easy/Moderate - 3 miles round trip



Located within the vast Pinto Basin and at the base of the impressive Pinto Mountain is a unique area known as the Pinto Basin Sand Dunes. Enjoy a slow paced, all cross country hike over lightly undulating sandy terrain to this, the largest set of "sand dunes" found within the park. Once at the dunes, there will be a brief discussion of how the dunes were formed. This is a great place for desert wildflower viewing including the possibility of seeing the elegant and aromatic Desert Lily. Desert tortoise may also be seen as well as signs of the nocturnal desert kit fox.

Discover the Pinto Wye Arrastra

Date/Time: Saturday, February 29, 8 am - noon
Meet at: Oasis Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Kevin Powell, Author, Photographer
Hike Level: Easy - 2 miles round trip



Enjoy a slow-paced, all cross-country hike over lightly undulating terrain to an historic mining related mill site, known as an arrastra. This arrastra, the only surviving one in the park was used to mill gold ore into a final product that could then be sold to the United States Mint or used to purchase other goods or services. The wooden arrastra, which was probably built and used in the 1930s, has been partially restored and maintained by the Park Service and is on the National Registry of Historic Places.

Hike to the Wonderland of Rocks Overlook **NEW!**

Date/Time: Saturday, March 14, 7:30 am - late afternoon
Meet at: Joshua Tree Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Kevin Powell, Author, Photographer
Hike Level: Moderate - 4 miles round trip



The jumbled mass of the Wonderland of Rocks covers twelve square miles of intriguing landscape. On this mostly off trail, out and back cross-country hike, we will walk to a high vantage point that overlooks this vast and complex geologic wonder. Fine views of the upper Queen Valley along with Quail Mountain, the Park's high point, and Mount San Jacinto and San Gorgonio Mountain will be had as well. If luck is with us, Desert Bighorn sheep might be observed on some of the rocky outcroppings that are found along our infrequently traveled path.

Quail Springs Wash: Water in the Desert **NEW!**

Date/Time: Saturday, March 21, 7:30 am - mid-afternoon
Meet at: Joshua Tree Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Kevin Powell, Author, Photographer
Hike Level: Moderate - 7 miles round trip



Water in the desert has always been a key link to success and survival. On this mostly off trail, cross country hike we will explore some historical water sources in the form of a still functioning well and a cistern that was once fed by a now dry spring and used as a public water source. On our return we will pass by the historically significant Samuelson Rocks with its inscriptions of late 1920's philosophy carved into the brown desert varnished boulders. As an added bonus, Quail Springs Wash and surrounding area is particularly good for spring wildflowers.

Discover Pine City

Date/Time: Saturday, April 18, 8 am - early afternoon
Meet at: Oasis Visitor Center
Fee: \$35 JTNPA member, \$45 non member
Instructor: Karlen, Naturalist, Desert Guide Easy/
Hike Level: Moderate - 4.3 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.

How Fit Do You Need To Be?

If you take part in a Guided Hike in JTNP, 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, take into account the "Hike Level" ratings. Please 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, call us at **760-367-5537**.

Creative Arts Courses

SIGN UP ONLINE
Click On Class Name

Route 66 Photography Workshop

Date/Time: Saturday, January 5, 9 am - sunset
Meet at: BLM Office in Needles
Fee: \$85 JTNPA member, \$95 non member
Instructor: Sandi Wheaton, Photographer, Instructor
Hike Level: Easy/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

Date/Time: Sunday, January 19, 9 am - sunset
Meet at: North Shore, Salton Sea
Fee: \$85 JTNPA member, \$95 non member
Instructor: Sandi Wheaton, Photographer, Instructor
Hike Level: Easy/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. 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!

Keys Ranch Nightscape Photography Workshop

Date/Time: Saturday, February 22, 3:30 pm - midnight
Meet at: Oasis Visitor Center
Fee: \$160 JTNPA member, \$170 non member
Instructor: Scott Klinger, 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!

Night Sky Photography

Date/Time: Saturday, February 29, 1 pm - 10 pm
Sunday, March 1, 9:30 am - 12:30 pm
Meet at: Oasis Visitor Center
Fee: \$120 JTNPA member, \$130 non member
Instructor: Dennis Mammana, M.S., Astronomy, Night Sky Photographer, Syndicated Columnist
Hike Level: Easy



If you enjoy photography and are fascinated by the desert night sky, this two-day hands-on workshop is for you! Noted TWAN sky photographer Dennis Mammana will teach participants how to use even the simplest of cameras to create magnificent celestial portraits without resorting to composites and fakery. The class will begin with tips for setting up and shooting the night sky including a few personal tricks of the trade. That evening, participants will head to the Hidden Valley Picnic Area to try out their new knowledge under the real night sky. The next morning, the class will look at images from the previous night, discuss their pros and cons, and try out some basic image processing techniques in Adobe Lightroom that will make your photos pop. Any camera, digital or film, will work, if it can be adjusted manually, used with a tripod, remote control, and can take exposures of 15, 30, or more seconds. Students should have a good working knowledge of their equipment prior to taking this class. Students need to provide their own camera, tripod, camera equipment, and dress in layers as the nights can be cold. Please bring a flash drive to share a field class image or two with the class on Sunday, if you'd like to get some personal tips.

Class size limited to 12 participants.

SIGN UP ONLINE

Click On Class Name

Creative Arts Courses

Photographing Joshua Tree by Moonlight **NEW!**

Date/Time: Friday, March 6, 6 pm - 10 pm
Meet at: Joshua Tree Visitor Center
Fee: \$85 JTNPA member, \$95 non member
Instructor: Craig Fucile, Photography Instructor
Hike Level: Moderate



Seeing the desert illuminated by moonlight is an experience not to be missed. It's a chance to encounter a quiet world of deep shadows and pale highlights, perceived by the eye as a soft-edged, nearly black and white landscape, where a familiar scene in daytime can start to look mysterious. The sky, absent all but the brightest stars and planets, attains a steely darkness. Yet as our eyes adapt to the dim light, we can notice the subtle beauty of the desert under moonlight. In this evening field class, you'll learn useful photographic techniques such as camera placement, focusing, exposure, lens settings, and composing the photograph. Craig Fucile, photography instructor at University of California Riverside Extension, will guide and assist participants in making moonlight photographs at two locations in the Park, away from city lights. Participants should to bring a tripod and remote (or wireless) switch for their camera. Don't miss this opportunity to find new ways to focus on Joshua Tree National Park.

Mastering Landscape Photography

Date/Time: Friday, March 6, 7 pm - 9 pm
Saturday, March 7, 5 am - 9 pm
Sunday, March 8, 5 am - 3 pm
Meet at: Oasis Visitor Center
Fee: \$170 JTNPA member, \$180 non member
Instructor: Ralph Nordstrom, Photographer, Instructor
Hike Level: Easy/Moderate



What goes into making a great landscape photograph? You can find scores of articles that promise you will master landscape photography in 10 steps or take your photography to the next level in 5 steps or shoot like a pro in 7 steps. These articles keep on appearing. And most offer valid tips. But it's not that easy. We can't promise you that you will be a master landscape photographer at the end of this course. What we can promise is you will have a much clearer idea of what is involved in pursuing this journey. We will provide practical guidelines on the gear you need and how to get the most out of it, the creative use of exposure and sharpness, the use of composition and light to create a mood or convey what inspired you to take the photograph, the magic that happens in the digital darkroom and how to unleash the artist within you.

This class offers an optional but exciting camping experience in the pristine Lost Horse Campground.

Joshua Tree Through the Lens

Date/Time: Saturday, March 7, 6:30 am - 5:30 pm
Meet at: Joshua Tree Visitor Center
Fee: \$85 JTNPA member, \$95 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.

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 760-367-5537.



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!

Creative Arts Courses

SIGN UP ONLINE
Click On Class Name



Capturing Joshua Tree Landscapes with Acrylics

Date/Time: Saturday, April 4, 8:30 am - 4 pm
Meet at: Black Rock Nature Center, Yucca Valley
Fee: \$85 JTNPA member, \$95 non member
Instructor: Janis Commentz, Artist, Instructor
Hike Level: Easy



Spend a day painting in beautiful Joshua Tree NP. Few destinations offer a landscape as unique as Joshua Tree National Park. In this one-day class, you will focus on observation, setting an intention for the day, and learning the process of acrylic landscape painting.

Janis Commentz is known for her color-intense palette and loose brush strokes. The morning will begin with basic instruction on the process and introduction to materials. Topics include laying out your palette, color mixing, translating your observations into a painted image, tips for lights and darks, and planning a successful composition. Participants will move outdoors to observe, sketch, and learn what to look for in a potential landscape. Both group and individual instruction will help you develop your painting and explore new techniques.

The desert is a fragile environment and eco painting techniques will be used. Please note that the class will follow Leave No Trace principles and all painting and clean-up supplies must be removed from the park.

Watercolors with Bold Color and Impact

NEW!

Date/ Time: Sunday, March 15, 2020, 10 am – 4 pm
Meet at: Black Rock Nature Center
Fee: \$85 JTNPA member, \$95 non member
Instructor: Diane Morgan, Artist, Instructor
Hike Level: Easy

Get started painting in watercolor, or improve with solid basic skills for creating realistic watercolors that glow and pop. Learn to add drama and impact starting with a strong image and using good color choices to make the subject take center stage. Learn color mixing both on the palette and on the paper. Rather than boring exercises, techniques will be learned while actually creating a finished painting. Often called the most difficult of mediums, there are plenty of tricks and tips in watercolor to help correct mistakes and re-work an area that is less than the desired result. Class format is a step-by-step process that incorporates demonstrations of one small section of the painting at time throughout the class time. Photos of the subject matter are provided and every student will be painting the same painting. The class is interspersed with several demonstrations, then time to paint as instructed. Each student will receive one-on-one guidance along the way. Bring your enthusiasm and go home inspired. Supplies not included, but are available for purchase for an extra \$25 directly from the instructor.

National Park at Night Photo Workshop

Date/Time: Saturday, May 1 6:15 pm - 1 am
Meet at: Oasis Visitor Center
Fee: \$150 JTNPA member, \$160 non member
Instructor: Gabriel Biderman and Matt Hill, National Parks at Night
Hike Level: Easy



America's national parks are breathtaking in the daytime, but at night they take on an otherworldly beauty. We hand-craft night photography workshops that provide world-class education both in the classroom and in the field. You'll be led by two experienced and enthusiastic instructors. The result is a rich experience full of high-flame education where you get individual attention and awe-inspiring images of natural nocturnal splendor. We will begin with a discussion about night photography - the night sky, necessary camera equipment, camera settings, focusing at night, light painting, field techniques, and how the same techniques can be used to create star trails. At astronomical twilight we will be ready to start our nightscape photography. We will break into small groups who will be free to wander Keys Ranch and work on subjects of their own interest. Gabriel and Matt will spend time with each group checking settings, composition, light painting, and answering any questions you have. 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!

SIGN UP ONLINE
Click On Class Name

Creative Arts Courses

Field Sketching for Non-Artists

Date/Time: Saturday, May 2, 8:30 am - 3:30 pm
Meet at: Joshua Tree Visitor Center
Fee: \$85 JTNPA member, \$95 non member
Instructor: Fran Calvert, Artist, Instructor
Hike Level: Easy



Would you like to enjoy the beauty of Joshua Tree National Park more fully? Are you a person who “could never draw?” This class will teach you the basics of field sketching, focusing on using the simplest most light-weight tools, methods and materials to streamline the process for non-artists. You will learn how to focus your natural powers of observation to complete a finished sketch that is accurate in detail, scale, and proportion using easy-to-learn skills that you can practice anytime and anywhere. All materials are provided.

Drawing the Natural World With Charcoal and Pastel

**NEW
FORMAT!**

Date/Time: Saturday, May 2, 9 am - 5 pm
Sunday, May 3, 9 am - 3 pm
Meet at: Joshua Tree Visitor Center
Fee: \$170 JTNPA member, \$180 non member
Instructor: Monica L. Mahoney, Instructor, Artist
Hike Level: Moderate Hikes



Join Joshua Tree based artist Monica L. Mahoney for a weekend of immersive field sketching in the heart of Joshua Tree National Park. Known for her expressive drawing style and knowledge of the native flora and ecology of the region, Monica will lead participants on a journey to capture the shapes, forms, and vistas of the natural world using graphite, charcoal, and neutral tone soft pastel. Sharing her wealth of knowledge, Monica will start each morning with a guided sensory natural-history walk in a spectacular private location in search of the objects and vistas that students will choose to draw. Students will explore the power of line quality, shading techniques, and using foreground, middle ground, and background shapes for creating strong, believable compositions. On Saturday students will practice developing observation skills using a variety of sensory drawing techniques with plentiful practice sessions. On Sunday, students will have the opportunity for longer drawing sessions with pastel and individualized instruction as needed. The class is designed for all skill levels and taught in a supportive environment. The goal of the workshop is to sharpen our natural observation skills while having fun and exploring how drawing brings us closer to Nature and ourselves. The skills learned in this class are complimentary to the upcoming Watercolor painting workshop May 9-10. This class will be conducted at the exclusive Lost Horse Campground with the option to “car camp” overnight on Saturday night.

Watercolor Field Painting: Exploring a Sense of Place

**NEW
FORMAT!**

Date/Time: Saturday, May 9, 9 am - 5 pm
Sunday, May 10, 9 am - 3 pm
Meet at: Joshua Tree Visitor Center
Fee: \$170 JTNPA member, \$180 non member
Instructor: Monica L. Mahoney, Instructor, Artist
Hike Level: Moderate Hikes



Join Joshua Tree based artist Monica L. Mahoney in a watercolor field painting immersion in the heart of Joshua Tree National Park. Known for her Plein air watercolors of sweeping desert vistas and knowledge of the native flora and ecology of the region, Monica will guide participants in capturing the “Genius loci” or spirit of this special place. Students will tap into their natural observation skills and paint the landscape in field journals using basic watercolor and water-based pencil techniques. On Saturday, to warm up, Monica will guide students in recording sensory observations during an easy and informative natural-history walk in a spectacular private location. Students will then practice gesture and thumbnail painting as well as basic color mixing techniques while using value, tone, line, shape, and depth to capture the essence of the landscape. Sunday will allow for more/further immersive painting with longer sessions and one to one instruction as needed. This workshop is perfect for artists, novices, naturalists, campers, hikers and backpackers and all who are interested in developing their watercolor painting skills in the field. For all skill levels, the class is designed to have fun and explore how painting, sketching and journaling in Nature helps us see the world—and ourselves—with new eyes. Some previous drawing experience will be helpful but not required. All students will be given individual attention as needed. This class will be conducted at the exclusive Lost Horse Campground with the option to “car camp” on Saturday night.



Black Rock Symposium Series

The Black Rock Symposium Series will return to feature panel discussions on relevant topics affecting the California Desert Parks, including Joshua Tree National Park and the Gateway Communities. Academic and policy experts will analyze and assess core aspects of challenges to Joshua Tree National Park and the Sonoran and Mojave Deserts that surround and include the park.

January 20 **Shifting Landscapes: Studying the Impacts of Climate Change in JTNP**

Panelists: Dr. Lynn Sweet, UC Riverside; Chris Clarke, National Parks Conservation Association; Neil Frakes, Vegetation Chief, Joshua Tree National Park

Moderator: Daren Otten, President & Superintendent, Copper Mountain College

February 28 **Balancing Tourism with Conservation and Preservation**

Panelists: Representative from Visit California; Representative from the Greater Palm Springs Convention and Visitor Bureau; David Smith, Superintendent, Joshua Tree National Park

Moderator: Daren Otten, President & Superintendent, Copper Mountain College

March 20 **Fire in California**

Speaker: Char Miller, Director of the Environmental Analysis Program and W.M. Keck Professor of Environmental Analysis at Pomona College.



7 pm - 8:30 pm at the Bell Center, Copper Mountain College, Joshua Tree

Each event is Free, but pre-registration is required.

Register at www.joshuatree.org

This symposium is underwritten by California Grassroots Fund of the Rose Foundation and supported by a partnership with Copper Mountain College

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

1/2 Day (up to 4 hours) \$300 for the first 4 people;
\$30 per person thereafter

Full day (7-8 hours) \$475 for the first 4 people; \$45 per
person thereafter

Rates effective through June 2020

Joshua Tree National Park Association

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.



Joshua Tree Visitor Center



Oasis of Mara Visitor Center



Cottonwood Visitor Center
(artist rendering of future center)



Black Rock Visitor Center



Desert Institute Instructors

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.

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.

LINDA BRAATZ BROWN is recently retired from her role as science coordinator for the office of San Bernardino County Superintendent

CHARLOTTE BURNS was born in Palm Springs and she grew up scrambling on boulders, discovering treasures in desert washes and wildflowering. She spent four years as a naturalist at Whitewater, Mission Creek and Pioneertown Mountains Preserves, where she led family programs and school tours, educating others about the environment and the preciousness of water. She studied natural resources at College of The Desert and received her B.A. in Film and Media Studies at the University of California, Santa Barbara.

FRAN CALVERT has lived near Joshua Tree National Park for nine years. She enjoys sketching, riding horses, hiking, and backpacking year-round in the park. She is a retired technical writer with a B.A. in fine arts and art history from Columbia University. She has been a Desert Institute volunteer since 2014.

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.

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. She recently received her Ph.D. at the University of Nevada, Las Vegas and her research on the ecophysiology of arid land moss survival in the face of a changing climate will continue. The heart of her dissertation seeks to predict the capacity for desert mosses “hide” from climate change in protected microhabitats. In the coming year she will be finishing a moss flora of Grand Staircase Escalante National Monument, UT, and hopes to make a field guide for the general public to learn how to become observant and respectful “moss hunters”!

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.

CAROLINE CONWAY has been teaching about deserts to people of all ages for 30 years. She worked as Education Director at The Living Desert for 15 years before moving to Joshua Tree. She recently retired as the Director of Education for the The Wildlands Conservancy’s Desert Preserves, but continues to volunteer as a docent for both The Wildlands Conservancy and Big Morongo Canyon Preserve. She also teaches Conservation of Natural Resources for College of the Desert. Caroline became interested in watersheds through her work at the three desert preserves, all of which protect canyons that contribute to surrounding desert aquifers.

CARYN DAVIDSON completed her yoga teacher training at the White Lotus Foundation in Santa Barbara, CA. Caryn is a retired NPS Ranger who worked in the education branch at Joshua Tree National Park. She also managed the park’s Artist-in-Residence program for ten years, helping structure and maintain an arts program that invited juried artists in a wide variety of disciplines to spend time working on projects related to desert themes. She then assumed the role of Director of Education at Big Morongo Canyon Preserve, part of Sand to Snow National Monument. Caryn is a published poet who believes passionately in the power of writing as a means of discovering one’s singular voice.

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.

BRUCE FESSIER has been a journalist and desert community leader since 1979. His family has owned property in Joshua Tree since 1958 and his 40-year career with The Desert Sun in Palm Springs has yielded awards for stories on Sonny Bono (2018), the history of the Mafia in the desert (2015), the new federal uses of the Annenberg Sunnylands Estate (2012) and long-form stories on presidents Ronald Reagan and Gerald Ford. He received a Lifetime Achievement Award in Music Journalism at the CV Music Awards in June.

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

Desert Institute Instructors

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.

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.

ALEXIS GRINBOLD has been honing her culinary skills from a young age. She learned to appreciate the pleasures of making and eating food from her mother, who was classically trained in French Cuisine. With a Master of Fine Arts from School of the Art Institute of Chicago and a Bachelors Degree from University of California San Diego she teaches Art and Art History at various colleges in Southern California. Her love of food and the outdoors come together with two things, good food from fresh ingredients. She has discovered over the years, there is really no wrong way to do it, but you must bring a taste for adventure!

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.

DE KARLEN is a Certified Interpretative Guide, who works as a naturalist hiking and desert guide with Desert Adventures in both the Colorado and Mojave deserts. Previously, Ms. Karlen worked as an Interpretative Park Ranger in Yosemite National Park, so she truly enjoys sharing knowledge about the wonders and processes of our natural world.

SCOTT KLINGER received his first camera at the age of 7, a Kodak Instamatic, which he used to serially photograph naval warships in the San Diego Bay during the late 80's. Since then he has been exhibiting his work at galleries and film festivals for over ten years. His work is in the permanent collection of the Kiyosato Museum of Photographic Art and his most recent film *The Lover Who Doesn't Forget* was screened at the 66th Festival de Cannes and his film *Memento Mori* won Best Experimental Film at the Hollywood Reel Independent Film Festival. Scott holds degrees from UCLA and UC Irvine.

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.

AMANDA LOPEZ is the Desert Institute Assistant and she helps organize the field classes to run smoothly. She also works for the San Bernardino National Forest as an assistant researcher surveyor conducting visitor use surveys. Her environmental career started as a volunteer for the Klamath National Forest, where she was 1 of 3 trail crew members for over 800 miles of trail. At Klamath she found her passion for all types of recreation management. However, her heart never left the desert or JTNP, as your home is where your heart is. She hikes daily with her best friend, an 80 pound German Shepard.

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.

MONICA LYNNE MAHONEY, BFA, studio art, MLA Landscape Architecture, is a multidisciplinary artist, educator and native plant naturalist living and working in Joshua Tree, CA. Mahoney's diverse artistic practice includes drawing, painting, sculpture & installation, landscape design, ecological restoration, and award-winning public engagement and civic art programs that integrate art and the environment. She believes that no matter the skill level, the practice of painting and drawing in nature provides a unique portal into the natural world, which helps us to see and connect with Nature—and ourselves—in new and profound ways.

Desert Institute Instructors

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.

JENNIFER MAY is a fourth grade teacher at Arroyo Elementary: An International Baccalaureate World School. Within her district, she is a spotlight teacher who serves as a model for other educators who want to learn strategies that promote learner curiosity, inquiry, and agency. She is passionate about National Parks, so she brings them into her classroom in a variety of ways.

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.

DIANE MORGAN is an award-winning artist working in watercolor and oil. Her work has been featured in American Art Collector, International Artist, Southwest Art, American Artist, Artist Magazine, Sunset Magazine, Art Patron, Palm Springs Life, The Art of Watercolor and Watercolor Artist.

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.

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-six 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 thirty-seven 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.

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 twenty-eight 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.

MARY WALLS is currently a California Regional Environmental Education Community (CREEC) Network Coordinator for Region 10 (Riverside, Inyo, Mono, & San Bernardino counties). She has been in education for fifteen years. Mary creates educational programming for The Incredible Edible Community Garden. Her passions include Action-driven Inquiry, PBL, NGSS, STEM, STEAM, Environmental Literacy, and creative school culture. She has conducted school and district trainings and workshops in northern and southern California. At home, she wrangles three daughters and a filmmaker husband.

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.

Class Registration Form

You may register for a course by phone, fax, mail, or online at 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 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

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. 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.

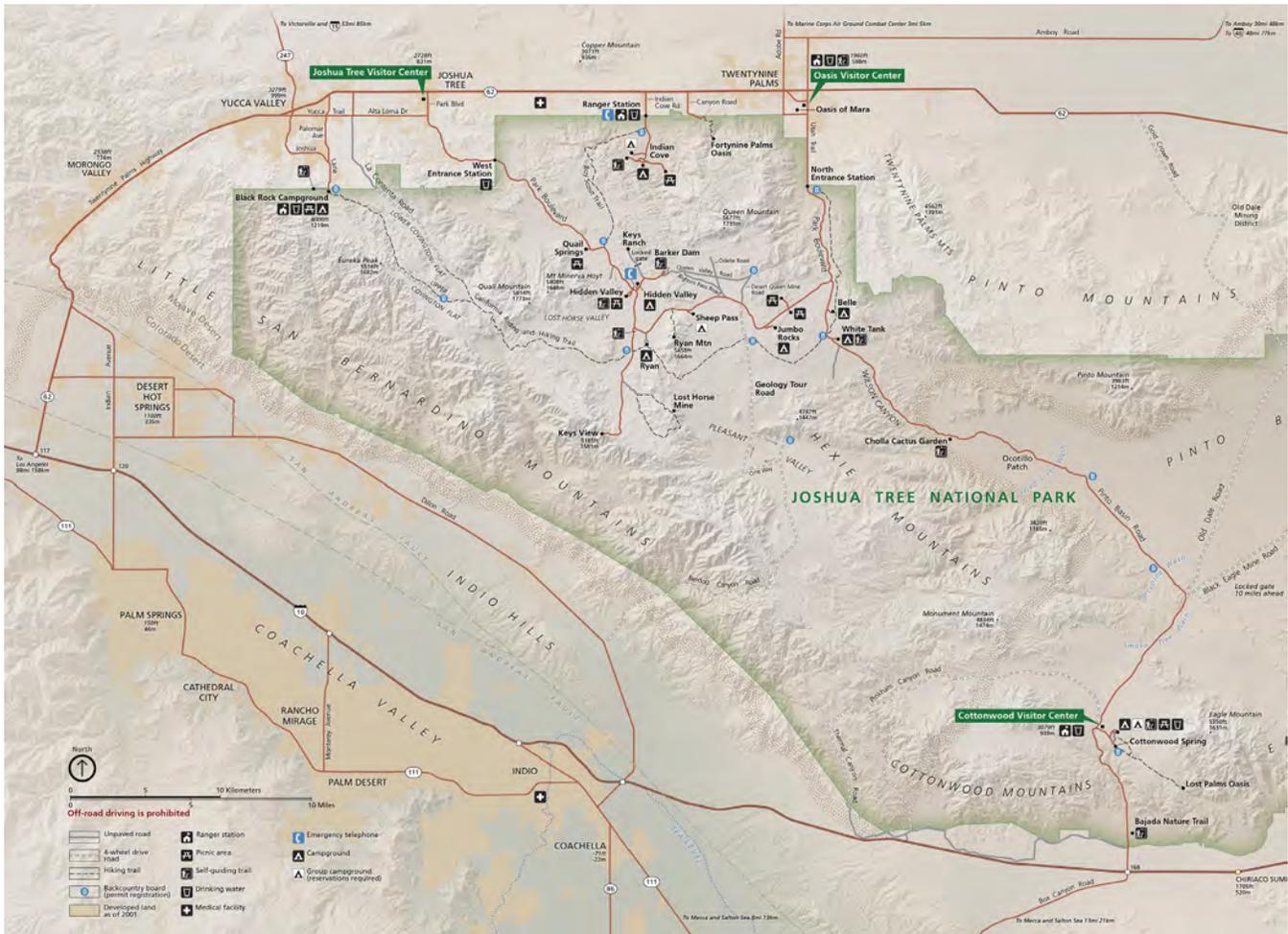
CAMPING AND PARK INFORMATION

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. Campground fees will apply. Participants are responsible for their own accommodations and food. Visit the park website at nps.gov/jotr 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!





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.

Meet Our New Instructors



CHARLOTTE BURNS was born in Palm Springs and she grew up scrambling on boulders, discovering treasures in desert washes and wildflowering. She spent four years as a naturalist at Whitewater, Mission Creek and Pioneertown Mountains Preserves, where she led family programs and school tours, educating others about the environment and the preciousness of water. She studied natural resources at College of The Desert and received her B.A. in Film and Media Studies at the University of California, Santa Barbara.



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DIANE MORGAN is an award-winning artist working in watercolor and oil. Her work has been featured in American Art Collector, International Artist, Southwest Art, American Artist, Artist Magazine, Sunset Magazine, Art Patron, Palm Springs Life, The Art of Watercolor and Watercolor Artist.

The Desert Institute at Joshua Tree National Park accepts class proposals on a year round basis. Our classes are not limited to Joshua Tree National Park as we conduct classes in both the Mojave and Colorado deserts. To submit a class proposal, please contact Kevin Wong, Director, at 760-367-5539 or desertinstitute@joshuatree.org.



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 - 27, 2019

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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Joshua Tree National Park Association is a private, not-for-profit Cooperating Association working in partnership with Joshua Tree National Park to help in its achievement of programming goals in education, interpretation, scientific and historic research and activities.



Join The Adventure



Follow us and share images and ideas!