



DESERT INSTITUTE
JOSHUA TREE NATIONAL
PARK ASSOCIATION

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GEOLOGY OF AMBOY CRATER

FIELD CLASS / FALL 2023

PROGRAM OVERVIEW

Southern California is known for its trembling fault lines, quirky monzogranite outcroppings, and majestic mountain. But we've got other geological wonders too, like volcanoes! One of the finest examples of a cinder cone you'll ever stumble across is located right here in the Mojave Desert: Amboy Crater. Learn about this designated National Natural Landmark and other dormant volcanoes that stretch across the desert in this full day geology lesson. Participants will experience endless lava fields and learn about the formation of the swiss-cheese-like appearance of the rock as they hike the 4-mile round trip to the rim of the crater and back.

MEETING LOCATION

[Amboy Crater National Natural Landmark](#), Amboy, CA

DATE and TIME

Saturday, December 02, 9a to 3p

Please arrive on time; we start classes promptly, and in the case of hikes or other classes on the go, we cannot wait for students who arrive late.

ACTIVITY LEVEL: CHALLENGING

This hike will ascend the volcano flanks on a trail of lava, which can be uneven and challenge balance. Total elevation gain/loss is approximately 800 feet, and the ascent to the crater rim is steep. Black lava rock can reflect heat. Descent into the volcano is optional, but remember if you go down into the crater, you must hike back up. Please contact us if you have questions about accommodations or your ability to participate.

EXPERIENCE REQUIRED

None

WHAT'S INCLUDED

- First aid and emergency supplies for the group

WHAT'S NOT INCLUDED

- Meals
- Lodging
- Transportation

GET TO KNOW YOUR INSTRUCTOR: Alessandro Grippo, Ph.D., Geological Sciences

Alessandro 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. Alessandro also worked in the oil industry between his M.S. and his Ph.D., was a fellow faculty member at NASA-JPL for one year, and brought his students from Catalina Island to Nevada, from the Salton Sea to northern California. His interests and study, together with his passion for photography took him throughout Europe and the Americas looking for geological features.

PROGRAM AGENDA

We'll meet at the Amboy Crater Parking Lot at 9am and after a brief introduction to the hike and geology concepts, we'll start our trek to the crater. We'll take a lunch break around noon (on the crater), and will be back to our vehicles by 3p.

SPECIAL NOTES ABOUT THIS ACTIVITY

Gas/charging stations are far and few between in the Amboy area; please begin your journey with a full tank/charge. There is little to no cell service in Amboy and the surrounding areas. Please plan ahead and check traffic conditions/road closures in the area the day before if you are driving from LA. **All participants must complete the [health questionnaire and liability waiver](#) ahead of the program start date.**

WHAT TO BRING

The essentials for all field courses

- Water, between 3 and 4 liters per person for a full day outing
- Food and snacks, easily packed and eaten in the field, for the duration of your course
- Close-toed athletic shoes or hiking boots; no sandals, not even hiking sandals!
- Sun protection: hat, sunglasses, sunscreen; light-colored long-sleeved shirts are recommended and very effective on hot days
- Warm layers for cooler mornings/evenings (it can be surprisingly cold!)
- Backpack to carry food, water, and any personal items you need for the day
- Notebook and pencil are always good to have

Recommended

- Compass/GPS device
- Camera
- Binoculars
- Field guides

Suggested reading materials

- “Roadside Geology of Southern California” by Arthur Gibbs Sylvester and Elizabeth O’Black Gans. Available at the Joshua Tree National Park Visitor Centers or joshuatree.org

FAQ

WHO DO I CONTACT IF I AM RUNNING LATE?

Please call our main line: 760-819-4714 and if no one answers, please call the Desert Institute coordinator, Benny Lopez: 949-241-9693.

For classes meeting in the park, please take into consideration the time it will take to go through the entrance gate—on weekends after 9am, you may wait up to 45 minutes! (15-20 minutes is typical.) For afternoon activities, you will also want to allot time to park, as parking lots tend to be congested between 10am and 4p in the busy season. **There is no cell service in the park**, so please plan accordingly!

WHAT IF I NEED TO CANCEL?

Desert Institute will provide a full refund if we are notified 14 days in advance. If we are notified less than 14 days in advance, we are unable to process refunds for any reason. (But we would like you to notify us if you are unable to attend.)

DOES DESERT INSTITUTE CANCEL ACTIVITIES FOR WEATHER OR LOW ENROLLMENT?

Desert Institute runs classes rain or shine, with the exception of astrophotography classes, which require mostly clear skies in order to be successful. If we do not meet our minimum of 4 registered participants for any given activity, we will cancel the activity with 48+ hours notice. We recommend that you purchase travel insurance, as we are unable to reimburse for expenses you incur due to a canceled class, such as airfare and hotel.

ARE THERE ANY THINGS I NEED TO DO TO PREPARE?

All participants must return the completed [health questionnaire and signed waiver](#) before the day of their activity. **Failure to do so will cancel your registration.** If your course enters Joshua Tree National Park, you must **download or print your park pass** ahead of the class, or you will pay the entrance fee at the gate, which is currently \$35 per vehicle.

CAN I BRING MY KIDS? MY SPOUSE? PETS?

Only registered participants may attend Desert Institute activities unless noted in the activity description. If this is a kid-friendly activity, please make sure your child(ren) meets the age requirements. As much as we love our pets, we don't allow them in the field with any of our activities.