

TRAVEL & OUTDOORS

Holy Smoke! Texas Has Actual Volcanoes. Here's Where to See Ten of Them.

They've been extinct for millions of years, so you'll just need a little imagination—and this handy guide.



By Amy Weaver Dorning

June 17, 2021

9



You're Reading Your First Free Article | Already a subscriber? [Log in](#)

[SUBSCRIBE NOW](#)



I've always loved driving around my home state to see its natural wonders. Whether it's wading in the Blanco River looking for dinosaur tracks or entering the coolness of one of Texas's nine thousand caves (as long as it doesn't involve crawling), there are endless sights to see. As COVID-19 restrictions loosen, this summer is a perfect time to hit the road and hike through canyons, swim in spring-fed pools, and explore . . . volcanoes?

In case you didn't know, Texas's fascinatingly diverse geology was formed in no small part by periods of violent volcanism that occurred between about 27 million and 80 million years ago. There are roughly two hundred igneous sites around the state that include a mix of intrusive and extrusive structures, such as calderas, or the collapsed remains of volcanoes that erupted at one point. There is even an extinct volcano in Austin, near where I live, that I never knew existed.

It was the TV series *9-1-1: Lone Star* (a pandemic guilty pleasure if ever there was one) that tipped me off to the state's volcanic past. The now internet-famous episode centered on the eruption of Pilot Knob, a long-extinct (but very real) volcano on the outskirts of Austin, about five miles from my house. The scenes of firefighters saving residents from encroaching lava, flying volcanic rocks, and a hot tub that had turned into a boiling geothermal pool were more cringey than terrifying, but still, the show piqued my curiosity. I was not alone: according to Google Trends, searches for "Austin volcano" peaked in the days after the show aired and viewers expressed mock anxiety on Twitter. The episode left me wondering: What's the story of volcanoes in Texas?

I reached out to Leon Long, a professor emeritus of geology at the University of Texas at Austin, for answers. For forty years, Long taught a geology field course that included the history of Pilot Knob and the adjacent McKinney Falls State Park, and he knows the area inside out. He assured me that no, there is no chance of Pilot Knob or any other Texas volcanoes becoming active again. "They're completely dead now, largely eroded or hidden by deposition of younger sediment," he said, adding ominously that some associated volcanic centers, such as one near the [Austin] airport, lurk

You're Reading Your First Free Article | Already a subscriber? [Log in](#) [SUBSCRIBE NOW](#)



We met on a rainy Sunday afternoon at the intersection of Dee Gabriel Collins Road and McKinney Falls Parkway, in far southeast Austin—a good spot, Long said, to view Pilot Knob from a distance. (The summit of Pilot Knob is owned by the City of Austin, off-limits to casual visitors.) He emerged from his SUV, holding a clipboard and wearing a well-worn baseball cap that said “Captain Geo.” Undaunted by the drizzle, he set up an impromptu lab in his trunk and for the next hour I got a mini course on Central Texas volcanism. There were charts and maps with clear overlays and even a volcanic rock from Pilot Knob that was 80 million years old.

Pilot Knob appears today as a modest, low-slung hill, but according to Long, it was much bigger when it was “alive,” approximately 80 million years ago. He tried to paint a picture for me: During the Cretaceous period, dinosaurs roamed freely and Texas (along with much of the continent) was submerged under a warm, shallow sea. “Pilot Knob lay partly below and partly above sea level,” he explained. Millions of years of alternating periods of dormancy and activity—when seawater seeped into the throat of the volcano, contacted hot magma, and erupted, blasting fine material into the sky—created a “many-deckered sandwich” of limestone (dormant times) and green volcanic rock (active times). Subsequent erosion has, he said, “excavated a moat into the soft volcanic material, while harder limestone upholds a low encircling escarpment.” Though I didn’t completely grasp the finer points of the geology, I was amazed at how this placid-looking hill had weathered so much upheaval in its very long existence.

You’re Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW



**Eighty million years ago, McKinney Falls State Park, in Austin, was under a shallow sea.
Courtesy of the Bureau of Economic Geology**

Our next stop was McKinney Falls State Park, a short distance away, to view the lower falls, where Long wanted to show me “spectacular manifestations of Pilot Knob volcanism.” From a path off the small parking area, we began to carefully edge our way down to the falls on a rain-slick apron of limestone that had been deposited on the sloping flank of the volcano, just below sea level at the time. Long pulled a dropper bottle of dilute hydrochloric acid from his bag and had me dribble some on the rock bed, which produced the magic fizz that happens when acid meets calcium carbonate. All around us were ripple marks caused by wave action pushing grains of calcium carbonate back and forth on the shallow seafloor, before everything was cemented into hard rock. Trace fossils, where prehistoric creatures had burrowed many millions of years ago, were everywhere. It felt like walking on the surface of the moon, or, well, a giant lava field.

With Onion Creek roaring over the falls, I nervously clambered after him down slippery rocks (he may be in his late eighties, but I had to hustle to keep up with him) so I could see under the hard limestone lip that upholds the falls, where there is sandwiched at the base a layer of soft, green volcanic material that “blasted into the sky, fell into the sea, and immediately reacted chemically with seawater to transform into clay minerals,” according to Long. There it sits after 80 million years while visitors splashed in the falls’ plunge pool, probably totally unaware that they’re swimming under what was once a volcano.

You’re Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW



Where to See Volcanoes in Texas

Before hitting the road, pick up a good field guide, such as *Roadside Geology of Texas*, by Darwin Spearing. A Texas geological highway map is available at the Bureau of Economic Geology, which has an excellent online store. Far Flung Outdoor Center in Terlingua offers jeep tours of the Big Bend region and will customize itineraries for those especially interested in volcanoes. The following list was created with the generous help of the Bureau of Economic Geology and geologists Linda Ruiz McCall, Pat Dickerson, and Tristan Childress.

Chisos Volcanic Complex

Location: Big Bend National Park

Volcanism: Lava domes, ash flows, and calderas make for some of the best geology in the state. The western caldera wall rises steeply from the valley floor, and through the Window, an erosional notch in the wall, the grand lava dome of Casa Grande dominates the landscape (see photo).

Highlight: Viewed to the east as sundown approaches, the reddish hue of the rhyolites and ignimbrites adds to the impression of a rugged volcano.

Viewpoint: Ross Maxwell Drive en route to Santa Elena Canyon.



Volcanism: Between 31 and 35 million years old, this striking cluster of “intrusive alkaline igneous bodies” (formed underground and exposed by erosion over time) rises out of the Chihuahuan Desert.

Highlight: From Dell City, you can also see El Capitan to the east (it’s magnificent at sunrise).

Viewpoint: The best physical access point to the mountains is from the New Mexico side, but they can be viewed on U.S. 62, driving west toward El Paso.

Davis Mountains

Location: Fort Davis

Volcanism: The 35-million-year-old Davis Mountains are formed by magma from two volcanic centers—the Paisano Volcano, west of Alpine, and the Buckhorn Caldera, northwest of Fort Davis.

Highlight: Limpia Canyon and Wild Rose Pass provide excellent exposures of the varied and extensive flows and pyroclastic strata.

Viewpoint: The 75-mile scenic drive on Texas highways 118 and 161 through



is exposed in nearby highway roadcuts.

Highlight: Be sure to check out the information display at the rest area on U.S. 90, erected by the **Big Bend Snapshot of History Project**, which includes a QR code to access photos and **videos** about the area's geology.

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW



Viewpoint: Driving west from Van Horn on Interstate 10, the distinctive sedimentary folds and rocks of this volcanic mountain range rise up dramatically. This stretch of highway also takes you past the Eagle Mountain caldera.

Three Dike Hill

Location: Southernmost Big Bend Ranch State Park

Volcanism: At this 27-million-year-old site, dark basalt dikes cut up through

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW



historic Fort Inge, and a roadcut three miles west of Sabinal, where you can see dark volcanic breccia rocks weathered by white caliche.

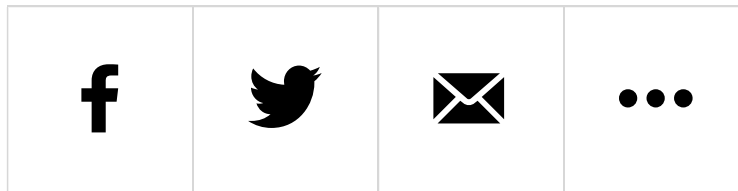
Highlight: Mount Inge is a broad, dark dome (elevation 140 feet) that presides over the state historical park.

Viewpoint: Fort Inge Historical Park, a mile south of Uvalde.

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

[SUBSCRIBE](#)
[NOW](#)





[VIEW 9 COMMENTS](#)

TRENDING

1 [The Resurrection of Bass Reeves](#)

By [Christian Wallace](#)

2 [New Luby's Owner Won't Tear Up the Menu \(or Hold the Mayo\)](#)

By [Shawn Shinneman](#)

3 [Dear Austinites, You Have Permission to Move to an Affordable, Weird City: Houston](#)

By [Evan Mintz](#)

4 [No Gogh: 'Beyond Van Gogh' Exhibit Is a Very Expensive Screen Saver](#)

By [Michael Agresta](#)

5 [Buc-ee's: The Path to World Domination](#)

By [Eric Benson](#)

6 [The Cluck Stops Here: Texas Restaurants and](#)

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

[SUBSCRIBE NOW](#)



Bars Struggle to Sell Cheap Chicken Wings

By [Paula Mejía](#)

7 The Next Battle of the Alamo!

By [Chris Tomlinson](#), [Jason Stanford](#) and [Bryan Burrough](#)

8 Simone Biles's NFL Safety Boyfriend: "I Didn't Know Who She Was"

By [Richard Justice](#)

9 Trying to Live My Best Life in a Port Aransas Dream House

By [Wendi Aarons](#)

10 Holy Smoke! Texas Has Actual Volcanoes. Here's Where to See Ten of Them.

By [Amy Weaver Dorning](#)

RECOMMENDED

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW



TRAVEL & OUTDOORS

Seven Outstanding
Parks for Riding or
Renting Horses

By Pam LeBlanc

TRAVEL & OUTDOORS

Texas Parks by
Horseback Offer a
Whole Other View

By Pam LeBlanc

TRAVEL & OUTDOORS

Meet a Texas Plant
Hunter Who's Combing
Forests and Fields to
Save Rare Flowers

By Molly Glentzer

TRAVEL & OUTDOORS

The Implausible
Experience of Kayaking
the Trinity River in
Downtown Dallas

By Alex Temblador

FOOD & DRINK

It's Berry Season in
Texas. Here's Where to
Pick Your Own.

By Rose Cahalan

You're Reading Your First Free Article | Already a
subscriber? [Log in](#)

SUBSCRIBE
NOW



8 Comments

Texas Monthly

 Disqus' Privacy Policy

 Login ▾

 Recommend

 Tweet

 Share

Sort by Best ▾



Join the discussion...

LOG IN WITH

OR SIGN UP WITH DISQUS 



Name



Jean Kutzer • 19 days ago

Uvalde has a large concentration of basalt. Unfortunately its only quarried for sand and gravel. It has a very high level of paramagnetism and hold heat for hours. Very heavy and chip resistant its ashame its not being used for bbq or fireplaces or tile. Basalt tile is currently imported from China.

3 ^ | ▾ • Reply • Share ›



CypressTexas ➔ Jean Kutzer • 6 days ago • edited

Interesting comment, we use "decomposed" granite for our driveway and I am surprised that some pieces will stick to a strong magnet passed over it. FYI the last time we visited Enchanted Rock I questioned the park rangers in the office how long they had each worked there (I think the least was 2 years) and then asked them if any had ever seen lightning strike it and they all said no.

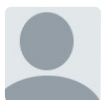
^ | ▾ • Reply • Share ›



JK Mossalgue • 18 days ago

Wonderful piece, beautifully crafted! I had no idea there were ancient volcanoes in Texas, and the geologist sounds like a terrific character. Looking forward to checking some of these out.

2 ^ | ▾ • Reply • Share ›



Alessandra Sealander • 10 days ago

Thanks for writing an article about some of the amazing geology found in Texas! If you're interested, please check out this video some of us made at UT Dallas about some of the ancient volcanoes found in West Texas mentioned in this article. Not spam I promise! We are a legit student and professor run geoscience education channel :)

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

[SUBSCRIBE](#)
[NOW](#)





--Alessandra Sealander

1 ^ | v • Reply • Share ›



Susan Rayburn • 21 days ago • edited

I get to see many of these majestic remains on a regular basis as I live in Alpine. They never cease to amaze me.

1 ^ | v • Reply • Share ›



J. Lee Millican • 3 days ago

Johnny Millican

^ | v • Reply • Share ›



J. Lee Millican ➔ J. Lee Millican • 3 days ago

I was raised at Silver, Texas and became fascinated at any early age when Dad would till up his garden and Pull up these rocks that I thought were meteorites at the time. I would keep them awhile and finally just throw them back to the land. I finally understood as I researched them that they were volcanic in origin. Possibly volcanic bombs. My question I am still looking for is why they are in that area? I still have the proof in one picture at least and one may still be at my daughter's house. Can anyone tell me how volcanic bombs would be in this area with no visible knowledge of volcanic activity on the surface. There are marine fossils in higher elevations.

Which gives me the idea of when the inland sea was here that volcanic activity was underneath. This has been a lifelong mystery of mine. e-mail aprilfooldonetwice11@yahoo.com

^ | v • Reply • Share ›



Ann-Marie • 9 days ago

Great Article! You certainly painted a picture in my mind! I am now hoping to venture to Texas again someday soon to this time see volcanic history!

Thank you for your wonderful article! 🏆🏆🏆🏆

^ | v • Reply • Share ›

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

[SUBSCRIBE NOW](#)



ADVERTISEMENT

You're Reading Your First Free Article | Already a subscriber? [Log in](#)

SUBSCRIBE
NOW

