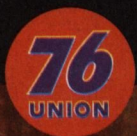


A WEEKEND ADVENTURE DRIVE

WASHINGTON — OREGON EDITION

The magic and color of caves



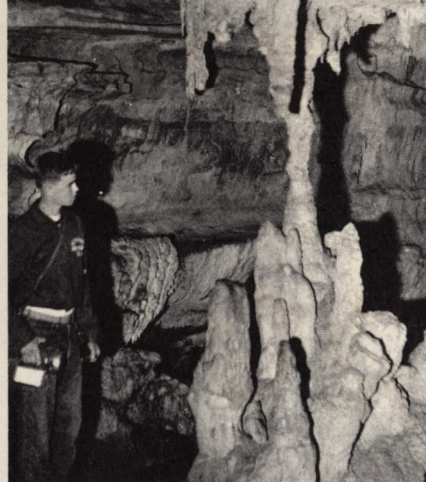
HOLLOWED OUT of a cliff by the ocean, melting deep into a glacier or dissolving the limestone in a mountain, caves offer you a hidden world of color, magic and mystery. Soft lights play on translucent marble and twinkling crystals, shapes leap out of the shadows and a stream slips quietly alongside. Unexplored passages lead out from the trail; absolute blackness closes in when the guide turns out the lights.

Some caves you'll find packed with sea lions, others with adobe ruins, wine or all-year ice. Many come decorated with pictographs, stalactites and dripstone "sculpture" from dwarfs to cathedrals. Caves keep cool (about 50 degrees), so bring a sweater or jacket; a flashlight comes in handy for peeking among formations and crystals.

Here, from your Union 76 Minute Man, is a guide to caves, and the hope you will enjoy looking around—underground—on your Weekend Adventure Drive.



Warm air, slipping in where a stream runs out of a glacier, melts caverns like this. Sunlight filters through the thin walls, tints the cave with an unearthly, luminous blue. Lava-tube caves have similar shape left by magma in center flowing out.



Mystery crystal in caves is aragonite, which sends delicate white clusters out in all directions like a lovely, underground coral. Pits of caves often contain black sand flaked with gold, sometimes fossil animals and an Indian skeleton.

Columns mark merger of stalactites and stalagmites. Easy way to remember which is which: stalactites drip down from the ceiling (both words spelled with a "c") and stalagmites build up from the ground (both words spelled with a "g").



Guided tours explain how ground waters (containing acid) dissolve limestone and marble, open passages for streams that cut larger openings. Later waters drip through to deposit crystals. Dry caves don't "grow."



Community apartments in a limestone cave overlook a wooded valley where Indians irrigated maize. Many rooms are smaller, separate caves.



Insulated by the earth and "breathing" in oak casks, wine mellows in a cave cut out of the rock 80 years ago.

CAVES YOU CAN VISIT IN WASHINGTON AND OREGON



WASHINGTON

① Gardner Cave

Washington's big limestone cave in Crawford State Park, with fluted white columns, huge natural bathtubs of rimstone and an upside-down stream channel in the ceiling (left by a glacier that once filled the cave with ice). Lights on from 9 a.m. to 5 p.m.; free self-guided tours.

② Indian Rock Caves

Cross the Pend Oreille River at Usk, drive north a half-mile past Seseah Creek—you can spot the caves above the parking area. Biggest has two entrances, fine view of valley. Father DeSmet held services here for the Indians in 1844.

③ Dry Falls Cave

Duck into this cool cave, once an air bubble between two lava flows, after your hike down from the rim at Dry Falls State Park.

④ Paradise Glacier Caves

The beautiful "ice caves" at the ends of the Paradise-Stevens glaciers in Mount Rainier National Park—where running water and warm air hollow out huge, scalloped caverns, and the sunlight filters through to tint the walls a luminous blue.

⑤ Boulder Creek Cave

Turn off Highway 410 at Cliffdell, drive to the campground, then take the trail upstream a mile—and you'll see Boulder Creek rushing out of this 400-foot cave it cut through a collapsed hillside.

⑥ Mt. Adams Ice Cave

The prettiest and most accessible of the many nearby lava caves—natural "deep freezes" where winter drafts turn underground water to ice and rock layers insulate it all year. Drive west from Trout Lake, then step down



a Forest Service stairway among columns and stalactites of clear, crystalline ice.

OREGON

⑦ Sea Lion Caves

A 1500-foot-long cavern the ocean gouged out of the coastal cliffs 12 miles north of Florence—with natural tunnels for the surf and sea lions, and an elevator to let you go down and watch. The big bulls on the rocks weigh a ton, keep harems of a dozen cows, breed pups you can see nursing. The cave operates from 9 a.m. to 5 p.m., costs 95 cents for adults and 35 cents for children.

⑧ Oregon Caves

Magnificent marble halls up to 60 feet high continue one mile into this Siskiyou mountain-side—with lights, river and guided tours inside and a picnic area, forest lodge and campfire talk when you emerge. Summer tours run from 9 a.m. to 7 p.m., cost \$1.00 for adults, 60 cents for children.

⑨ Indian Cave

Drive east 50 miles from Roseburg to Dry Creek, then hike north three miles to see the pictographs, arrowheads and bone fragments in this cave—now accessible by a new Forest Service trail.

⑩ Lava River Caves

A tube in the lava rock a mile long, 50 feet wide and 35 feet high—formed when the outer crust cooled and the center kept flowing—and decorated with hanging "lava-cicles," delicate sand gardens and ice stalactites. You can rent lanterns at the State Park office, open 9 a.m. to 5 p.m. and explore the cave at your leisure. A dozen similar ice caves appear from the Santiam Pass south almost to Fort Rock.

⑪ Malheur Cave

Another mile-long lava cave, with a main cavern big enough for a convention (the Masons each summer) and a lake at the far end deep enough for boating.

NOW EVERY MILE YOU DRIVE NEW ROYAL 76 GASOLINE
GIVES YOUR ENGINE A **CHEMICAL TUNE-UP**



The West's most powerful premium now
tunes your engine chemically 3 different ways.

1. New Royal 76 minimizes the formation of varnish and sludge deposits on pistons and valves.
2. New Royal 76 prevents pre-ignition knock—assures better timing of combustion for greater power and performance.
3. New Royal 76 cleans your carburetor continuously.

The results of this continuous chemical tune-up: your engine operates more efficiently, far longer. Your maintenance costs are reduced. And you enjoy the performance of the West's most powerful premium.

Try a tankful of new Royal 76...the gasoline that's so different it exclusively wears U.S. Patent No. 3,011,879. You get it at the Sign of the 76, where you always get The Finest values in products and services.

New Regular 76—the West's most powerful regular gasoline—is also available at the Sign of the 76. It costs no more than any other regular gasoline of major quality. And now it cleans your carburetor continuously.

UNION OIL COMPANY OF CALIFORNIA

