

OREGON WELCOMES rock hunters to
State. . . .

Collectors of every age enjoy the thrill of
finding a flawless gem or a rare fossil, and
Oregon is the place to find them.

Come on out and try your luck in one of
the state's many rich deposits.

However, don't be disappointed if you fail
to "strike it rich" on your first outing . . . it took
hundreds of years to discover they had paved their
roads with gold-bearing gravel!



ROCKHOUND RULES

Oregon is a collector's paradise, but
even in a paradise it is wise to follow a few
simple rules . . . certainly they will tend to
assure the best possible success.

1. Select several sites within a fairly small area to avoid spreading valuable collecting time too thin . . . become informed on the material available and its exact location.
2. Don't hesitate to ask local collectors for information about selected sites . . . check with rockhound clubs wherever they are found.
3. Bring along the proper tools and equipment—including boots and sturdy clothing—for field work . . . depending on the material sought, you may find use for a rockhammer, shovel, prybar, sledge and chisel, or light pick mattock.
4. Make special preparations for seasonal weather conditions—canteens, caps and sunglasses for the desert, warm jackets for the mountains, etc.
5. Obtain permission of land owners before entering private property . . . don't leave campsite debris scattered about and **BE CAREFUL WITH FIRE.**
6. Take care in entering abandoned mine shafts—you enter at your own risk.
7. Don't throw rocks from cliffs and endanger persons who might be below . . . use proper care in handling tools.
8. Take only the material you will use and leave the rest for other collectors.

Published by
TRAVEL INFORMATION SECTION
OREGON STATE HIGHWAY DIVISION
SALEM, OREGON

MINES AND
MINERAL
RESOURCES
OREGON COPY 1

OREGON ROCKS, FOSSILS MINERALS

where to find them





OREGON'S MINERALS . . .

The state's metallic mineral wealth may be measured—at least in terms of collecting—by both the abundance and diversity of available types. Topping the list are gold, silver, copper, lead, zinc, mercury and iron. In addition, the only nickel mine in the United States operates in southwestern Oregon. Commercial grade uranium ore was discovered in south-central Oregon in 1955 and is known to exist in other parts of the state. The list of metals includes tungsten, molybdenum, cobalt, antimony and chromium.

GEMS . . .

Oregon is famous for its semi-precious gems. Agates, petrified wood, jaspers, opals and thunder eggs are found in quantity in many areas of the state. Also to be found in gem quality are hematite, garnet, sunstone, malachite and azurite, rhodonite, chrysocolla, obsidian and rock crystal. Native gold and cinnabar, when found in matrices suitable for polishing, are used as gem stones. Oregon's annual gem production is estimated at \$1,000,000.

FOSSILS . . .

Prolific fossil beds are located in many sections of the state. Of special interest are the John Day beds, first explored by Dr. Thomas Condon, the "Father of Oregon Geology." Fossils of plants and animals which existed 30 to 40 million years ago are taken from these beds. Clarno formation fossils, including many varieties of nuts and semi-tropical plants, have become world famous. Marine beds in western Oregon contain an abundance of fossil sea shells and occasional shark teeth and whale bones. Mollusks and rare specimens of marine reptiles occur in Oregon's rocks of the Mesozoic era (100 to 200 million years ago).

CLUBS, SOCIETIES & SPECIAL INFORMATION

Listed below are some members of the Northwest Federation of Mineralogical Societies. The members welcome inquiries from out-of-state collectors. For tips contact any of the listed clubs, or the local Chamber of Commerce.

- Agate Beach Society, Agate Beach, Oregon
- Albany Rock & Gem Club, Albany, Oregon
- Blue Mountain Gem Club, La Grande, Oregon
- Clackamette Mineral & Gem Society, Oregon City, Oregon
- Columbia Gorge Rockhounds, Corbett, Oregon
- Columbia Rock & Gem Club, St. Helens, Oregon
- Coos County Mineral & Gem Club, North Bend, Oregon
- Coquille Valley Gem & Mineral Club, Coquille, Oregon
- Corvallis Rock & Gem Club, Corvallis, Oregon
- Deschutes Geology Club, Bend, Oregon
- Eugene Mineral Club, Eugene, Oregon
- Far West Lapidary & Gem Society, Coos Bay, Oregon
- Fir Oak Mineralogists, Oakridge, Oregon
- Hat Rock Gem Club, Hermiston, Oregon
- High Desert Gem & Mineral Society, Bend, Oregon
- Hood River Valley Agate Club, Hood River, Oregon
- Illinois Valley Mineral & Hobbies Club, Cave Junction, Oregon
- John Day Basin Gem & Mineral Society, John Day, Oregon
- Juniper Rock Club Incorporated, Redmond, Oregon
- Klamath Mineral Club, Klamath Falls, Oregon
- Lebanon Geological Society, Lebanon, Oregon
- Madras Gem & Mineral Society, Madras, Oregon
- Mineral Minors, Salem, Oregon
- Morrow County Gem & Mineral Society, Heppner, Oregon
- Mt. Emily Gem & Mineral Club, Brookings, Oregon
- Mt. Hood Rock Club, Gresham, Oregon
- Newberg Gem & Mineral Society, Newberg, Oregon
- Newport Agate Society, Newport, Oregon
- North Lincoln Agate Society, Oceanlake, Oregon
- North Marion Gem & Mineral Society, Woodburn, Oregon
- Oregon Agate & Mineral Society, Portland, Oregon
- Oregon Trail Gem & Mineral Society, Pendleton, Oregon
- Philomath Rock & Mineral Club, Philomath, Oregon
- Polk County Rockhound Society, Monmouth, Oregon
- Portland Earth Science Organization, Portland, Oregon
- Prineville Mineral Society, Prineville, Oregon
- Rockamites, Forest Grove, Oregon
- Rogue Gem & Geology Club, Grants Pass, Oregon
- Roxy Ann Gem & Mineral Club, Medford, Oregon
- South Douglas Gem & Mineral Society, Canyonville, Oregon
- Springfield Rock Club, Springfield, Oregon
- The Stonecrafters, Enterprise, Oregon
- Sweet Home Rock & Mineral Society, Sweet Home, Oregon
- Stinkingwater Rock & Relic Club, Burns, Oregon
- Sundowners Rock & Mineral, Boring, Oregon
- Tek Rock Club, Portland, Oregon
- Tillamook Rockhounds, Tillamook, Oregon
- Trails End Gem & Mineral Club, Astoria, Oregon
- Treasure Valley Rock & Gem Club, Nyssa, Oregon
- Tualatin Valley Gem Club, Forest Grove, Oregon
- Tyee Mineralites, The Dalles, Oregon
- Umpqua Mineral Club, Roseburg, Oregon
- Vernonia Gem & Fossil Club, Vernonia, Oregon
- West Lane Rock & Mineral Society, Veneta, Oregon
- Willamette Agate & Mineral Society, Salem, Oregon

EXPLORING OREGON'S GEOLOGIC PAST

OREGON ABOUND with geologic wonders, ranging in size from the towering snow-capped peaks of the Cascade Range to fossilized seeds and plant spores of the Cretaceous deposit. These features form a visible link between the present day and a history that spans 400 million years.

THE OLDEST ROCKS found on the surface are the schists of southwestern Oregon and the limestone formations of central Oregon. Among the newest are the scattered volcanic cones and lava flows of recent volcanic activity. . . . One eruption occurred no more than 250 years ago—a "fraction of a second" in geologic time.

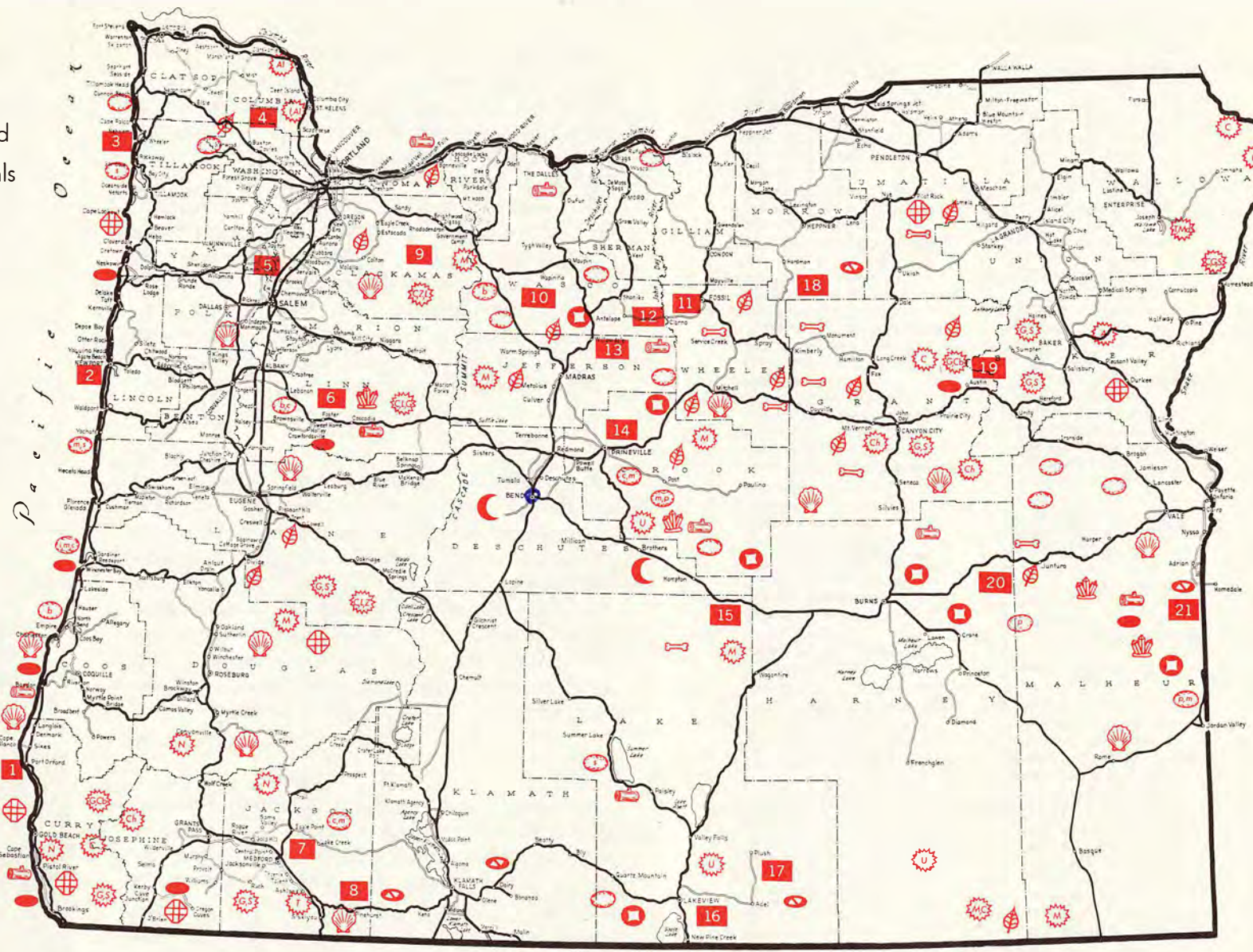
OREGON'S CLIMATE has ranged between glacial and semi-tropical, and as a result fossilized remains of such dissimilar creatures as the woolly mastodon and the crocodile can be found today.

SEMI-PRECIOUS GEMS are found in every section of the state, from the beaches on the eastern border . . . Oregon gems are "world class", in that they are found among the rocks of many geologic periods.



MINERALS, FOSSILS . . .

- Agates
 - b—banded
 - c—carnelian
 - i—iris
 - m—moss
 - p—plume
 - s—sagenitic
- Jaspers
- ☾ Obsidian
- ⊕ Garnet, Oregon "jade"
- ⊙ Metal minerals, ores
 - A—antimony
 - Al—aluminum
 - C—copper
 - Cb—cobalt
 - Ch—chromium
 - G—gold
 - I—iron
 - L—lead
 - M—mercury
 - Md—molybdenum
 - N—nickel
 - S—silver
 - T—tungsten
 - U—uranium
 - Z—zinc
- Opals
- ☞ Petrified wood
- ⊕ Quartz crystals
- ⊕ Thunder eggs
- ☞ Plant fossils
- ☞ Animal fossils
- ☞ Marine fossils



AND WHERE TO FIND THEM . . .

1 SOUTHERN OREGON BEACHES—Gem quality agate, jasper, petrified wood, serpentine, Oregon "jade" (grossularite garnet) . . . Merchant's Beach and Whiskey Run produce agatized myrtle and other woods, blue and white banded agates, flower jaspers; located off Seven Devils Road, between Bandon and Charleston . . . Oregon "jade" and serpentine are found in the gravel bars of the Rogue and Illinois rivers, and on the beaches near Gold Beach . . . Eocene marine fossils are found in the sea cliffs at Cape Arago State Park, near Coos Bay . . . Pliocene-Pleistocene fossils are found in the cliffs south of the Cape Blanco lighthouse, near Port Orford.

2 CENTRAL OREGON BEACHES—Quality agate, jasper, Oregon "jade", petrified wood . . . beach at Road's End produces colorful jaspers . . . excellent tumbling material is found from Oceanlake south to Newport . . . prized sagenitic agates (containing needle-like inclusions), bloodstones, and other jaspers and agates are picked up on the beaches between Yachats and Heceta Head—especially near the mouths of Big, China, Cummings, Tenmile and Squaw creeks . . . Miocene marine fossils, including shells and the bones of whales and sea lions, are found in the cliffs at Beverly Beach State Park, near Newport.

3 NORTHERN OREGON BEACHES—Variety of jaspers and agates, petrified wood, Oregon "jade" . . . beaches near Oceanside contain fine material, including colorful jaspers and sagenitic agates . . . large specimens are found on Tillamook County beaches . . . cliffs bordering Tillamook-Bayocean road contain Miocene fossil shells.

4 CLEAR CREEK—Carnelian and plume agates, jaspers . . . Clear Creek is located near the Nehalem River southwest of Vernonia . . . fine material is found in the gravel bars of the creek bed and on the hillsides above the creek.

5 WILLAMETTE RIVER—Gem quality agates . . . the best material comes from river bars and gravel company dredgings, especially from north of Salem to south of Corvallis . . . agates may be found even in the metropolitan Portland area.

6 SWEET HOME—Petrified wood, banded agate, carnelian agate, jasper, crystal-lined geodes . . . the area around Sweet Home was the location of a vast prehistoric forest, and an abundance of silicified fossil wood—some beautifully colored with clearly marked grain and ring structure—is found here . . . places to look include Ames Creek and the Calapooya River south of town, Crabtree Creek and the hills north of town . . . the fields, woods and streams of the area hold banded agates, crystal-lined geodes and fire-engine red jasper . . . Chandler Mountain is the location of large carnelians . . . prized Holley purple or Calapooya blue agates are found near Holley, southwest of town . . . fossil leaves may be taken from the railroad cut on the hill above town.

7 MEDFORD—Moss and dendritic agate, jaspers, milky chalcedony . . . many square miles of land in the area of Camp White and Eagle Point produce an abundance of gem material . . . a county road crosses Antelope Creek a short distance east of Eagle Point and

provides easy access to the creek bed . . . the Medford Chamber of Commerce has a listing of other locations.

8 GREEN SPRINGS MOUNTAIN—Banded blue-grey agate, crystal-lined geodes . . . best locations are on Highway 66 about nine miles east of Ashland . . . nodules are found in place in a basalt seam exposed by a highway cut, on the left side of the road going uphill . . . various road cuts near Ashland contain fossil shells of Cretaceous marine life.

9 CLACKAMAS RIVER—Cinnabar, petrified wood, jaspers . . . the river bed above Estacada produces gem quality cinnabar, a variety of petrified woods and dark green bloodstone, often associated with common opal . . . good to fair roads parallel the river for many miles.

10 SUNFLOWER FLATS—Banded agate, crystal-lined geodes, jaspers . . . area is located on the Wapinitia cut-off southeast of Bear Springs Forest Camp, between the Maupin road and the Warm Springs Indian Reservation . . . hillsides and creek beds produce fine material . . . digging is necessary in most spots.

11 CLARNO—Fossil nuts, leaves and prehistoric mammals, blue agate nodules, petrified wood, jaspers, zeolites, barite crystals . . . the world-famous Clarno fossil beds are located a few miles east of the John Day River, off the road between Antelope and Fossil . . . amateurs may collect specimens in the vicinity of the Oregon Museum of Science and Industry's Camp Hancock, but the mammal beds are reserved for scientific exploration . . . an outcrop behind the high school at Fossil contains excellent imprints of cones, leaves and Metasequoia needles.

12 ANTELOPE—Moss agate, jasp-agate, massive botryoidal agate, geodes, agatized woods . . . the Antelope area is one of the best known producers of gem-grade agate in Oregon . . . large boulders of moss agate in vivid shades of red, blue, green and yellow are found in the creek bed at the east edge of town . . . agatized wood is found four miles east of town on the hillside to the right of the road . . . obtain permission to collect on private land.

13 PRIDAY RANCH (COMMERCIAL)—Thunder eggs containing blue agate, plume agate, green and red moss agate, opals; polkadot . . . this famed location is reached by driving approximately 15 miles northeast of Madras on U.S. Highway 97, turning right on the old Highway 97 and driving for two miles to junction of road to Ashwood, and following this road for almost nine miles . . . attendants will direct you to the diggings, and a per-pound fee is charged for gem material.

14 PRINEVILLE—Thunder eggs, plume, carnelian and moss agate, nodules, petrified wood . . . the Eagle Rock area 15 miles southeast of Prineville produces outstanding red and black plume agate . . . the Maury Mountain area beyond Eagle Rock produces green, red, brown and golden moss agate and white plume agate, both "float" and "in place" . . . the Bear Creek area south of town produces red and green moss agate, nodules and agatized wood sections . . . the Wildcat Mountain area northeast of town produces Morrisonite—a hard jasper-like material

similar to the "wonderstone" of Utah—in thunder eggs . . . directions may be obtained at the Prineville Chamber of Commerce.

15 GLASS BUTTES—Obsidian . . . this site is found on Highway 20 between Bend and Burns . . . black, variegated and silver sheen volcanic glass is found just short of mile post 79, south of the highway . . . red and gold sheen material in great abundance may be located by continuing east to mile post 81, turning south toward cinnabar mine and driving two to three miles on the right-hand fork of the road . . . prized rainbow and double flow obsidians also are found.

16 LAKEVIEW—Thunder eggs, agate, jasper, nodules, agatized wood . . . Bullard Canyon and parallel Deadman Canyon, on the east outskirts of town, produce blue and purple agate, agatized wood, jasp-agate and orbicular jasper . . . highly prized blue agate is found near U.S. Highway 395, from two to five miles south of Lakeview . . . the Crane Creek area south of town contains agate-filled thunder eggs . . . Kelly Creek produces agate, jasper and thunder eggs . . . agates are found in quantity in the vast Dry Creek area west of town . . . directions at Chamber of Commerce in Lakeview.

17 HART MOUNTAINS—Quality agate nodules, fire opal, crystals of various kinds, sunstones, jasp-agate similar to Morrisonite . . . sunstone locations are on the desert flats west of the mountains . . . nodules and jasp-agate are found in mountain canyons . . . fire opal is found on the high peaks of the west rim . . . inquire at Plush or at Chamber of Commerce in Lakeview.

18 OPAL BUTTE—Opal-filled nodules . . . area is located about 35 miles south of Heppner, via State Highway 207 and forest roads.

19 GREENHORN—Fossils, variety of gem material . . . sections and fragments of fossil Cretaceous fern "trunks" (Tempesky) may be uncovered about a mile northeast of the ghost town of Greenhorn—several miles north of U.S. Highway 26 from Austin . . . best location is east of the abandoned IXL mine, toward Olive Creek . . . clearly defined fossils are usually golden in color, sometimes red . . . Greenhorn fern is jasper-hard and polishes well . . . agate and other gem material is found in creek beds and gold dredge trailings down river from Bates to Susanville . . . digging is necessary in most areas.

20 WARM SPRINGS RESERVOIR—Black dendritic and white plume agate . . . gem material is found along the west shore of the reservoir, located 18 miles south of U.S. Highway 20 from mile post 171 . . . best time to hunt here is when the water is low, from late August into winter . . . fossils of Pliocene plants are found in a road cut on U.S. 20 about eight miles west of Juntura . . . Pliocene animal fossils are found on the north side of the highway just west of Drinkwater Pass.

21 SUCCOR CREEK—Thunder eggs, jaspers, petrified woods . . . the area south of Adrian along Sucker Creek to Rockville is an extremely productive rock hunting location . . . thunder eggs may contain Pastelite or agate with inclusions of black dendrites, green moss or golden plume . . . excellent site is 19 miles south of Adrian, where the road and the creek converge.

