

Cave Inventory glossary: Definitions and images.  
Oregon Caves National Monument  
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## Cave Inventory Glossary: Definitions and Images

1. **Station Number:** Unique alphanumeric identification tag.
2. **Cave Zone (L, M, G, S):** **L**=Lower: Between the entrance and the 110 **M**=Middle: From the 110 to the Ghost Room **G**= Ghost Room area **S**=South end: South of Kincaid's Dance Hall
3. **Canopies (#):** Flowstone layers that extend out over open space. Most canopies in Oregon Caves form on sediment that later washed away (clastic canopy). Some may have formed on ice during the Ice Ages. A baldacchino canopy is one formed when downward growing flowstone meets a water surface.
4. **Cave Pearls (#):** A smooth polished and roundish concretion of calcium carbonate found in and around shallow holes in cave floors, generally into which water drips.
5. **Column (#):** A speleothem formed by the joining of a stalactite with its counterpart stalagmite.



6. **Conulites (#):** Cone-shaped deposits that line the walls of drip holes in sediment. Partial removal of the sediment at a later time can cause the conulites to stand in relief like empty ice-cream cones.

**Coralloid:** A speleothem type that is nodular, globular, botryoidal, or coral-like in shape and which forms from thin films of water. Cave popcorn is a rounded, microcrystalline coralloid that forms above the water saturated zone. Subaqueous coralroids form underwater but are not common in Oregon Caves.

7. **Superaqueous Coralloid (%):** Coralroids formed above the water saturated zone.
8. **Subaqueous Coralloid (%):** Coralroids formed below the water saturated zone (under standing water).
9. **Coralloid Stem AZM:** Azimuth of growth of coralloid with distinct stem. Use as a proxy for the direction of airflow: measure in the upstream direction. Stems point in the upstream direction.

- 10. Coralloid Patch AZM:** Presence of coralloid growth on one side of stone/formation preferentially to the other. Use as a proxy for airflow: measure azimuth in the upstream direction. The side of the stone with the coralloids indicates the upstream direction.
- 11. Rimstone Dams (#):** A speleoethem type consisting of a barrier of material which obstructs a cave stream or pool. Forms by calcite growth around the overflow edge of a pool.



- 12. Microgour Dams (%):** Like miniature rimstone dams. Found on steep flowstone slopes or on the underside of draperies (both in Exit Tunnel) that probably produce frequent and turbulent, but very shallow flows. Microgours don't get large enough to grade into rimstone dams.
- 13. Drapery (#):** Curtain-like, linear flowstone from water droplets running down a wall or ceiling. Often wavy or folded. May have a web-like attachment to stalactites.



- 14. Flowstone (%):** Where water flows in sheets down a surface, depositing calcite. Dogtooth spar crystals - that cannot be seen individually - sometimes impart a soft look to what then is called velvet flowstone.



- 15. Exfoliated Flowstone (%):** Flowstone that shows signs of erosion, or broken or peeled-off scales or lamellae as concentric sheets.
- 16. White Flowstone (%):** Pure white flowstone. Excludes creamy colors.
- 17. Flowstone-Incised Channels (%):** Microkarren composed of dendritic meander karren or microrills from flowing water re-solution.
- 18. Flowstone-Pitted (%):** Rounded cavities up to ten cm. across. Often from splashing water on flowstone and also from atmospheric corrosion (deeper, more vertical pits) or from other solution on bedrock.
- 19. Flowstone-Pitting AZM:** Azimuth of the pitting if pitting is present on one side of the formation preferentially over the other. Use as a proxy for airflow direction.
- 20. Flowstone-Upslope AZM:** Azimuth of the upslope direction of the flowstone as a proxy for the flow of water down the flowstone: measure the upstream direction.

**Moonmilk:** A speleothem type consisting of white, finely crystalline clay that feels like powder when dry and cream cheese when moist. May result in Oregon Caves from organic activity such as from bacterium actinomycetes, and less often or likely, fungi or algae.

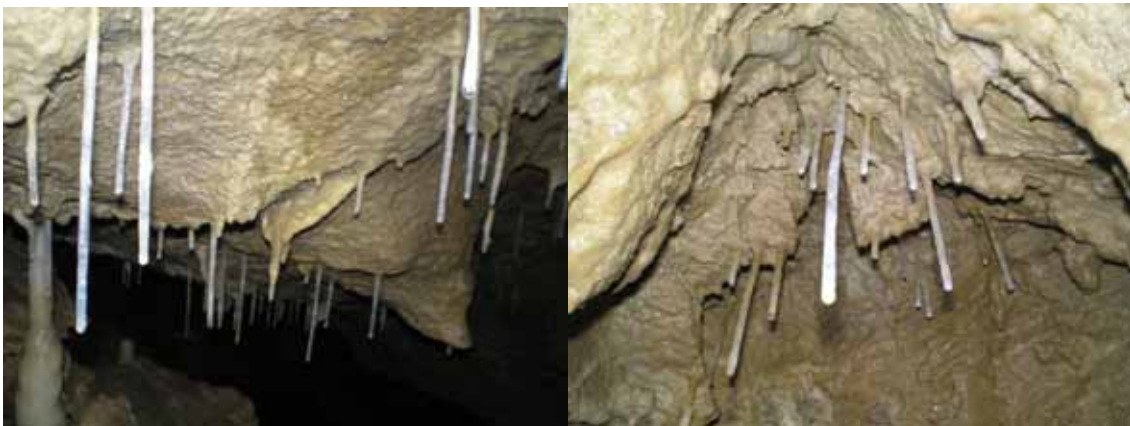
- 21. Moonmilk-Soft (%):** Active colonies of moonmilk.
- 22. Moonmilk-Hard (%):** Remains of moonmilk colonies no longer active (ex: Imagination Room formations).



- 23. Shelfstone (%):** A horizontally projecting speleothem ledge attached to the edge of a past or present pool. Top of shelfstone may be at the highest water level while the bottom may be the lowest water level.



- 24. Soda Straw (%):** A type of stalactite that at least initially is hollow, and is always tubular. The hollow center is the diameter of the size of the water droplet passing through it.



- 25. Broken Formations-Loose (#):** Broken speleothems present loose on the floor or on a ledge.





**26. Broken Formations-Cemented (#):** Broken speleothems present on the floor or ledge that have been cemented in place by calcite precipitation.

**27. Stalactites (#):** Usually cylindrical dripstone deposits on ceilings. They generally taper downwards due to longer periods of deposition higher up on the stalactite.

**28. Agmites (#):** A mounded accumulation of calcite formed by water dripping on the cave floor or ledge: Usually fed by the same water that forms stalactites. **Stal**



**29. Crystal-lined Pools (#):** Pools of standing water lined with subaqueous crystals visible to unaided eye. **C**



**30. Superaqueous Crystals (%):** Calcite crystals growing above the water saturated zone.



**31. Helictites (#):** A speleothem that twists and branches in an erratic manner seemingly without regard for gravity. Helictites have narrow central canals that feed capillary water to the growing tips.



**32. Construction Rubble (A):** Rubble on which over 50% of the surface is clean, fresh and angular indicating human influence in breaking the marble.

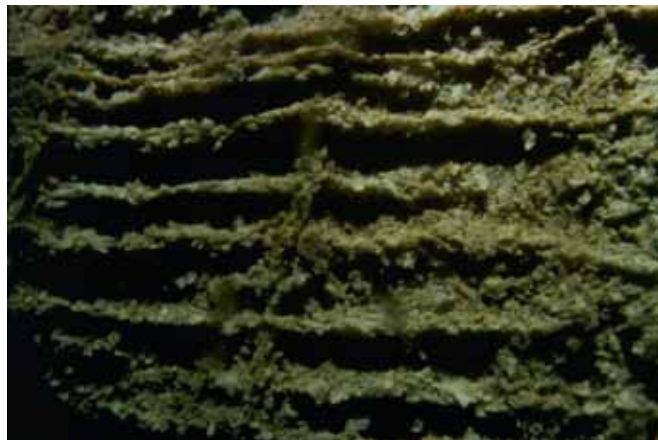
**33. Tour Trail Miscellaneous (A):** Anything that is not covered by another category. Includes steps, pavement, electrical systems, rock walls, etc.

- 34. Arches (#):** A residual portion of the roof of a subsurface karst cavity that has not collapsed. Such a natural arch may occur as a surface topographic feature (most often formed underground), or as a part of a cave system.
- 35. Bevels (#):** Horizontal channels with indentation more than 3" high in walls. Develop where vadose standing water with an open air surface absorbs carbon dioxide and therefore corrodes faster than water further below. More often formed by running water eroding sideways while flowing on top of sediments.



**Boxwork** - When palettes intersect from at least three directions. Apparently most common near faults at Oregon Caves. Like the white lines on the "marble ceiling", calcite filled cracks in the marble - creating the boxwork there.

- 36. Boxwork-Non Joint (#):** Boxwork clearly not controlled by jointing. No pattern is present and boxwork is anastomosing.
- 37. Boxwork-Joint (#):** Boxwork clearly controlled by a joint set, intersecting usually at 120-60 degree angles (sometime 90 degree intersections present as well).



- 38. Corrosion (%):** Erosion where rocks & soil are removed or worn away by natural chemical processes. Incl. alluvial, condensation, karst & karren.





- 39. Dome/Pit-Fluted (#):** Deep dome or shaft intersected by more or less horizontal passage, characterized by a dome-like top, vertical solution grooves & usually by showering water. Generally circular or oblong in plan view. Fluting - The process of forming a flute by the cutting or scouring action of a current of water flowing over a muddy surface. 2. Scalloped or rippled rock surfaces.
- 40. Dome-Smooth (#):** No fluting present in the dome.
- 41. Hoodoos (#):** Sediment structure of spires usually in an area of sporadic heavy rainfall or drips by differential weathering or erosion of horizontal strata. Incl. cemented & earth pillar (earth finger & rain pillar).
- 42. Meanders (#):** Overdeveloped or self-exaggerated bend in a stream course or other channel either on the surface or underground, caused by more erosion on the outside than on the inside of a bend through natural wash of the flow. Commonly originate in caves as half-tubes along bedding-planes during protocave development.
- 43. Pendants/Anastomoses (#):** Vertical (90 to 45°) petromorph projecting from a ceiling. Vertical section is >3 times longer than thickest dimension. Typically 10cm to 1 meter long. **anastomose pendant** – Those formed by anastomoses. In cross-section they often appear as small, inverted flat-topped mesas with rounded edges. (Anastomoses: A braided network of curvilinear, irregular, braided tubes usually from 5-20 centimeter, usually circular or elliptical in cross section. Commonly planar along low dip bedding planes or fractures but rarely big enough to be a cave.)



- 44. Pillars (#):** 1. Vertical speleogen connecting floor & ceiling & not wider than the combined width of the two passages it separates. Syn: mitertite. Cf. partition. 2. Remnant of bedrock joining the cave floor and ceiling. Can be formed either by solution or by other processes, as in breakdown.
- 45. Potholes (#):** Sharp-edged, rounded basins on the stream or river floor of soluble rocks both underground and on the surface. Trapped clastics enlarge potholes by powdering bedrock and thereby eroding particles and increasing the solubility of what remains. About 20-200 cm wide and deep.

**Rill:** A narrow groove up to 50 cm from dissolved or eroded in a sloping bedrock or sediment surface by a small stream of flowing water. Rills are usually vertical and perpendicular to the passageway.

- 46. Rills-Joint (#):** Rills controlled by jointing.
- 47. Rills-Non Joint (#):** Rills controlled only by the orientation of the passageway.
- 48. Scallops (%):** Asymmetrical hollows dissolved in a bedrock surface by turbulent water flow. The steep sides of the hollows indicate the direction of water flow. The velocity of the flow that forms them is inversely proportional to the scallop length.



- 49. Scallops-Upstream AZM:** The azimuth (compass bearing) of the scallops indicating the upstream direction of water flow.
- 50. Airflow-Upstream AZM:** Azimuth (compass bearing) of the direction from which air is flowing.
- 51. X-Section Breakdown (A):** Angular cave detritus > 10 cm. wide fallen into a cave room. Incl. block (ceiling, wall), chip, chockstone, congelifract, loose, rafted, room, slab (ceiling, wall), solid.

- 52. **X-Section Canyon (A)**: Steep-walled channel, gorge, or ravine cut by running water.
- 53. **X-Section Manmade (A)**: Manmade alterations ie. paths
- 54. **X-Section Tabular (A)**: Passageways controlled by bedding partings ex: White Formation Passage
- 55. **Clay Film (%)**: Clay film produces a clay stain if touched by dry cloth.
- 56. **Clay Worm-Complex (%)**: Each vermiculation averages at least two sharp angles



- 57. **Clay Worm-Long (%)**: > 3 times longer than broad. Usually horizontal.
- 58. **Clay Worm-Round (%)**: Vermiculation with rounded shape. Often greasy feeling.
- 59. **Clay Worm-Hard (A)**: Vermiculations that have been cemented with calcite

**Fill**: cave clastic sediment. Unconsolidated, transported deposits flooring or filling a cave passage.

- 60. **Fill-Clay (%)**: Clay that fills or almost fills a cave passage. Clay particles are less than .004mm and feel smooth in teeth or between fingers.
- 61. **Fill-Silt (%)**: Sediment with most particles between 1/16 & 1/256 millimeters or .0625- .004mm. Feels gritty in teeth or between fingers.
- 62. **Fill-Gravel (%)**: Rounded (usually by water) clasts; size of most particles > 2mm or 1/12".
- 63. **Fill-Breakdown (%)**: Angular cave detritus > 10 cm. wide fallen into a cave room. Incl. block (ceiling, wall), chip, chockstone, conglifract, loose, rafted, room, slab (ceiling, wall), solid.
- 64. **Fill-Flowstone (%)**: Passages that have filled in with flowstone.
- 65. **Fill-Cemented Clastic (%)**: Detritus fill has been cemented by calcite precipitation.
- 66. **Fill-Differentiated (A)**: Distinct layering or sedimentary structures such as imbrications are visible in the fill.
- 67. **Fill-Upstream AZM**: If the differentiated fill includes structures that indicate the direction of water flow, measure the azimuth of the upstream direction.
- 68. **Dikes-Breccia (#)**: Dikes composed of breccia, defined as a coarse-grained clastic rock, composed of angular broken rock fragments held together by a mineral cement or in a fine-grained matrix.



**69. Dikes-Quartz (#):** Fractures in the marble subsequently in-filled with quartz.



**70. Fault Offset (A):** Visible offset along a fault plane (ex: offset chert beds).

**71. Fault Dip:** The inclination (degrees from horizontal) and direction of tilt of the fault plane.

**72. Fault Strike:** Compass bearing of the line representing the intersection of the fault plane with the horizontal. Usually best to measure the strike using right-hand-rule: record the compass bearing of the strike so that the plane dips to the right.

**73. Interbeds-Ash/Argillite (#):** Planar layers of ash or argillite approximately parallel to the cave bedding orientation.

**74. Interbeds-Chert (#):** Planar layers of chert approximately parallel to the cave bedding orientation. Chert beds are often visible jutting out of the walls due to the fact they are more resistant to erosion than calcite.

**75. Jointing Visible (#):** Fractures in the bedrock with no visible shift or displacement along the plane.





- 76. **Air-Smoke Moves (A):** Airflow is strong enough to carry smoke.
- 77. **Air-Feel on Face (A):** Airflow is strong enough to physically feel.
- 78. **Air-Flame Wavers (A):** Airflow is strong enough to make a flame waver.
- 79. **Air-Flame Goes Out (A):** Airflow is strong enough to blow out a flame.
- 80. **Drip-Slow (A):** Dripping water is slower than one drip per 10 seconds per square foot.
- 81. **Drip-Fast (A):** Dripping water is faster than one drip per 10 seconds per square foot.
- 82. **Moist (A):** Water present on the cave walls and formations.
- 83. **Pooled Water (A):** Pools of standing water present.



- 84. **Stream (A):** Water flow confined in channels. Includes brooks, rivulets, runnels, creeks, & rivers.
- 85. **Maximum Passage Height in Feet:** Measurement in feet from floor to ceiling along a vertical line.
- 86. **Bats (#):** Number of bats visible.
- 87. **Bug Sites (#):** Insect sampling stations.
- 88. **Cave Slime (#):** Lichen-like white dots.
- 89. **Rodent Trails or Feces (#):** Slight lines (pathways) or dark patina
- 90. **Bones-Free (#):** Bones lying free on the surface.



**91. Bones-Buried (#):** Bones visible but only retrievable through excavation.



**92. Snail Shells (#):** Number of snail shell visible at each inventory location.

**93. Arrows (#):** Black carbide arrows burned onto the walls and ceilings of the cave.



**94. Artifacts (#):** Anything human created (does not include arrows, writing, survey markers, or trash). Includes remnants from the abandoned section of trail.

**95. Writing (#):** Number of signatures/other writing on flowstone and other formations. Writing can either be pencil markings or scratches in the formations.



**96. Breakage (#):** Number of broken formations.



**97. Healing (A):** Regrowth present on previously broken formations.



**98. Healing Length (#):** Length of regrowth.

**99. Potential for Breakage (A):** Soda straws within 6ft: can someone reach or climb to a position to break a formation? Fragility index from the fragility/hazards mapping project.

**100. Trash:** Current human material of no current use but not a structure. Most common litter in show caves is gum, kleenex, & photographic trash. Can be historic.

**Symbol Guide:**

**A: Yes (1)/ No(0)**

**#: 0, 1, 3, or 9**

**0: Not present**

**1: Single item present**

**3: Several items present**

**9: Numerous items present**

**%: Up to 10, 30, 60, 100%**