

THE CASCADE CAVER

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COMING EVENTS

Monday	June 10 1963	Regular Meeting, 8 P.M. Dr. Halliday's, 1117 - 36th Ave. E Seattle, Washington
Trips	June 22 - 23	Photo trip Ape Cave and other nearby caverns, Mt. St. Helens and Mt. Adams area.

THE CADOMIN CAVES: A NOTE

By R.S. Taylor, Dept. of Geology, University
of Alberta

Older residents of Cadomin, Alberta, believe the caves were known as early as the twenties, but the information was never widely disseminated. The caves became a matter of public knowledge in June 1959, and a reservation was placed on the land enclosing them by the Dept. of Lands and Forests.

The entrance of the main cave system lies about 1 1/2 miles SSW of Cadomin Station (G.S.C. Map 209A: Cadomin Sheet), on the North side of the NE-trending spur across the McLeod River and immediately W of the Inland Cement Company's quarry. This land is unsurveyed, but the entrance probably lies in Lsd. 15-25-46-24W5th. A reverse talus slope, spilling into the cave, stands 10 feet above, and conceals, the cave mouth from all but a few points of superior elevation. The entrance is 6170 ft. above MSL., and lies 250 ft. below the center of the second saddle in the spur (as counted from the valley). Only one entrance is known.

The main gallery of this system was surveyed in July by Prof. W. L. Bigg (Dept. Civil Eng., U. of A.) and myself, for the Dept. of Lands and Forests. This gallery has a slope length of 870 ft., and drops 210 ft. between its entrance and the closed lower end; it averages 20 x 12 ft. in width and height. A passageway leading off the lower end of the main gallery permits one to penetrate an additional 400 ft. into the mountain*. In following this route, one passes through the Mess Hall, the largest chamber found. It is approximately 75 x 150 ft., and averages 30 ft. in height. In all, about 1300 additional feet of side and interconnected passageways have been delineated by various people. Not all of the smaller passageways have been explored to their ends; thus the total extent of this system is not yet known.

Three smaller caves (maximum known length about 100 ft.) have been found on the dip (S) slope of the spur, about 1/2 mile ESE of the entrance of the main cave system. No interconnections between these smaller caves

THE CADOMIN CAVES (con't.)

and the main system are indicated.

According to MacKay's map (G.S.C. Map 209A), all these caves lie in upper Devonian limestone (Palliser). This limestone, underlain by a thrust, has a strike locally variable from NW to WNW, with dips of 18 - 30°. The trend of the caves is 140° T., and the plunge of the main gallery averages 13° in this direction. Thus, the length of the system is not down-dip, but closer to the strike direction.

The caves exhibit features attributed to solution activity in both the phreatic and vadose zones, and they have also undergone an episode of filling by clayey silt. Commonly, the floors of the main cave system are covered by large angular boulders of many tons' weight. Fortunately, the cave silt still mantles most of these boulders, else footing would be more precarious. The silt, however, is presently in the process of being removed by sub-surface water, and the layer of boulders is revealed to be 20 ft. deep in places.

There is little spectacular in the way of cave "formations" of secondary CaCO_3 . Dripstone forms are of small size: the largest stalagmite found is a bit over 12 x 18 inches; the largest stalactite seen is somewhat smaller. Draperies (Pendant blade - or ribbon-like forms) are more common, especially on the deeper, sloping ceilings. Flowstone coats some of the cave walls and in places is composed of several layers. This is especially true of the deepest part of the system.

The age of the caves is still a matter of conjecture. The fact that they are oriented across the dip, rather than down-dip, raises the question of whether they are at all related to the present attitude of the limestone. With the thick layer of caved boulders on the floors (and with no indication of recent rock fall), and with both dripstone and flowstone fragments apparently incorporated in the floor mantle of boulders and silt, it seems possible that the caves antedate the tectonic movements resulting in the present attitude of the host limestone.

*My thanks are due F.M. Connelly, J. Huston, and J.F. Pecover for information permitting a more complete picture of the cave complex to be drawn. Despite three trips to the caves, I have not yet been through all known passageways.

- Courtesy of W. R. Danner
University of British Columbia

NEW TRAINING AREA LOCATED NEAR SEATTLE - by Bill Halliday

On May 26, Don Holliday led an unusually motley party (6 adults, 6 children 2 dogs and a horse - the latter didn't get underground) to the talus caves on Tiger Mountain, east of Issaquah. A leisurely hour's walk on an old logging road and 20 minutes' brushwhacking sufficed.

TRAINING AREA (con't.)

One of these caves (Don's Cave) had been visited by the old Cascade Grotto in 1951, and found to be 111 feet long. Its spacious main section is roofed by a single huge boulder. Some small crawlways are also present. A large snail was collected in total darkness about 100 feet inside, and a millipede and a centipede in twilight. All will be sent to the American Museum of Natural History. Porcupine dung was found in this cave and in Tiger Mountain Cave.

The upper cave, which we term Tiger Mountain Cave, is the most interesting. While relatively small (perhaps a hundred feet of passages), it contains several small to spacious chambers, crawlways, steep, slippery slots, and three main entrances in its intricacies. It is an ideal beginners' cave, and will be excellent mapping practice.

Between these two caves is a small cave, recently discovered by Don Holliday's son, Guy, and consequently called Guy's Cave. It consists of a single spacious chamber with a small entrance at each end, plus a long, low sloping crawlway. Of interest here was the occurrence of brown as well as white "lava tube slime" - only the latter being noted in the other caves.

Don Holliday reports that on an earlier trip, beautiful ice stalagmites were present in Don's cave.

Close to the entrance of Don's Cave are some delightful vertical rock faces which should provide excellent climbing and rappelling practice. This area should prove a welcome change from our usual long, difficult and tiring cave trips.

CORRESPONDENCE

"Dr. William Halliday:

Dear Bill:

Local Civil Defense plans to stock certain lava tubes of the area with food and other supplies, for use in atomic bombings, appear to have been given up. Several caves were designated earlier, but the local CD director decided it would be impossible to stock the caves -- and keep the supplies intact, without guards.

In general, Civil Defense in Oregon appears very much on the rocks at present, result of Portland's action this week in refusing to allocate CD funds. Our local man now indicates that what he has in mind here is not shelter from bombs, but ones that could be used in "emergencies". I've been here some 40 years and so far there have been no emergencies, or in the 100 years that preceded my coming.

Presently, moonshot people, looking toward lunar landings, are studying the Derrick Caves in the Fort Rock area. Bunch here yesterday. Regards.

Phil Brogan, The Bend Bulletin
Bend, Oregon"

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