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COMING EVENTS
Monday March 8, 1965

Saturday March 20, 1965

Regular Meeting, 8 P。M. Dr. Halliday's, 1117 - 36th Avenue East Seattle, Washington

Novice trip to Ape Cave, Mt. St. Helens (weather permitting)

CRYSTAL FALLS CAVE in 1941 by V. L. Stoddard
(This report was hand-written in January, 1942 by Mr. Stoddard for Sewell Cramer who had begun a book on the caves of the United States but was killed during World War II. Through the courtesy of Paul Perry, it has been contributed to the N.S.S. as a part of the Clay Perry Collection.)

The caves through this vicinity, and there are many of them, are volcanic tubes. That means, as the name implies, that when this area was volcanized, which apparently it was many times, in the recent and distant past, these tubes carried molten magma. The tubes vary in size from 8 to 50 feet. Often the volcanic color is perfectly preserved.

The entrance to these tubes is generally through a break in the ceiling where the nearness to the surface does not permit the under-hanging rocks to drop and form the supporting dome. They are very similar in internal structure. Tubes are of black lava with an occasional enlargement that serves as rooms. They form perfect homes for rock chucks and bat colonies. They are occasionally death traps for domestic animals and wild life.

About twenty years before the opening of the present century, a small herd of Montana buffalo crossed the continental divide into Idaho. Heavy snows blanketed the mountains. They wintered on the open sagebrush country south of Spencer. As they congreated in herds to withstand the rigors of the winter blizzards, many broke through the ceiling of the volcanic caves and starved to death in its dark interior. Buffalo heads have been removed from caves near Spencer as speaking evidence of one or many wild tragedies.

Most of the caves are free from ice. Several have ice blocks at the extreme ends that might well designate them as ice caves. The cave that is the gem of the ice caves in this region is known as Crystal Cave.

This cave is some 25 miles southeast of Spencer, and is reached by a secondary dirt and gravel road and four miles of winding unimproved road.

For the sake of contrast we will assume that we are visiting this beautiful cave on a hot July day. We have left the improved road and are winding slowly
but comfortably over the last four miles. Our car goes into low gear many times as we cross lava outcroppongs, grass ridges, and through sagebrush flats. The road meanders like an old stream. We might get dizzy if this continued for long, but four miles even at a slow pace cannot last forever. We step out of the car and see to the north of us the majestic Continental Rockies, snow-capped most of the year. Just to the south the Parker-Egin Sand dunes are moving slowly but surely north.

We then realize that we are standing in the midst of a tremendous volcanic flow. The ridge on which we have stopped runs northeast and the quarter-mile that we can see has collapsed completely giving the appearance of a dry river wash. We walk carefully under a small natural bridge and down a steep narrow trail to the entrance of the cave.

The large entrance room is not unusual in itself, but is the key to the wonders yet to be seen. From the ceiling has fallen rock sufficient in size and number to almost close the entrance to the joining tube. This has kept the warm air from the surface from entering the lower regions of the cave and thus upsetting the conditions necessary for ice formation.

We proceed down another 35 feet to the floor level of the upper tube. We are thoroughly chilled at this point in the presence of a small lake, that is quite unusual. in that we have water over such clear ice that one must touch the surface with a foot or finger to satisfy himself that it isn't solid ice.

We walk around this lake on a catwalk that gives one the thrill of eminent danger.
The glow of gasoline lanterns lights up the tube. Water is dripping forming ice stalactites overhead and ice stalagmites underfoot. Skating is now possible and you shuffle along very carefully to keep your feet in their proper position. An obstruction rises ahead. Rocks have fallen in considerable numbers in the center of the tube and have been covered with a slick coating of ice. Atop this a sign reads DANGER!

As well it might,for just a few feet beyond the floor of our tube opens into a tube 30 feet below. We are able to see the frozen falls from above, falls that are at the upper end of a long ice flow. Just the reversal of the same conditions in water.

After five minutes of guarded walking we are at the foot of the falls. It is awe inspiring from this position. 30 feet in height with perfect contours which make it look as though the water had flowed over the rock and instantly frozen.

On either side of the falls is a perfect ice slide that gives you a thrill that is experienced in no other cave. Sliding from the Grand Falls Room into the dark chamber 20 feet below requires the calling together of the sterner braver stuff within you.

Here you come into full view of the marvelous crystals; crystals formed in many shapes. Clusters hanging 18 inches from the ceiling so delicately designed and minutely fastened that one can blow them down easily.

The entire ceiling and parts of the walls are covered with these crystals. The sparkle and glitter is certainly a delightful experience. Jack Frost must work all summer designing these beautiful frescoes that will be enjoyed and marvelled at by countless thousands in the years to come.

No details yet, but Don Dilley, Luurt Nieuwenhuis and Bill Simpson carried shovels through a recent smowstorm, hopefully eyeing the big sink near Sumas Mountain Cave. Arriving at the site, even they were deterred by the magnitude of the job.

And so a quick look at Sumas Mountain Cave: full of water as usual at this pleasant season.

And so a quick look around for more of anything. Two small sinks truned up northwest of Sumas Mountain Cave. Only three hours digging was required to get into the cave in one of the sinks. Five hours later they staggered out, first reports indicate, with part of the cave still blocked by water. They estimate over 300 feet of passage. Cascade Cave's new record may not last long.

## THE AXE FWLL

As expected, Bill Halliday's book manuscript bounced back from the publisher with a resounding thud and the word CUT: To be precise, cut it from 210,000 words to about 125,000 .

What really hurts, however, is a cut from 150 -plus photographs to around 60. At least they'll be on the pages with the text, rather than bunched together in clumps.

More bulletins later.

Does anyone know anything about an Alaskan cave east of Point Hope? Rumor has it full of ice and possibly known by a Professor Giddings.

## VISITORS FROM VANCOUVER ISLAND

Clarence Hronek (pronounced Kronek) visited Seattle briefly in February, and lent the CAVER the reprinted article on "Horne Lake's Wonder Caves" from the B.C. Motorist.
He had news of several Canadian caves:
CODY'S CAVE - just outside Ainsworth, near Nelson, is now under the Department of Parks and Recreation and signs soon are to be installed. The cave is said to be 1,100 feet deep (probably long). It has been written up since the turn of the century.

FLORENCE LAKE CAVE is a 200-foot limestone cave near Victoria.
HOUR GLASS CAVE is the deepest he has seen - in the Gordon River area of Vancouver Island. $\mathrm{He}^{\prime} \mathrm{s}$ been down about 175 feet.

TRAP CAVE near Skutz Falls is the prettiest he's seen on the island. There are several caves in that area. Logging roads are no longer traversable nearby, and a hike of about 2 hours is necessary.

SWANSON'S CAVE near Cowichan Lake contains catchable rainbow trout, Attention speleoangler Luurt Nieuwenhuis!

## MORF MISERY TRIPS

Don Dilley, Luurt, and Co, slogged through much snow recently (i) unsuccesfully seeking Jensen Cave and (2) visiting Ape Cave. Won't spring ever come?

## STILL ANOTHER MISERY TRIP

Verne Freese reports a mid-winter visit to Gardner Cave the weekend of February 20th. when he had to hike through two miles of snow.

He did not enter the room at the end of the main route because of high water. He noted several bats, one flying. He reports the cave wide open - to more than tourists. A well marked animal trail leads to the entrance where humans thoughtfully have installed a ladder. From the short passage beyond came a distinct odor of wet fur. Since the trail seemed to consist mostly of bear tracks, he decided not to turn speleobiologist.

SURVEYOR, SPELUNKER DIES AT 71

William Hawthornthwaite (Thorne) Forrest of Victoria B.C. died Friday, August 14, 1964, at the age of 71.

Mr. Forrest was a B.C. land surveyor and prospector for more than 50 years. It was just a year ago that he led the Victoria-Daily-Colonist sponsored cave expedition of the Vancouver Island Speleological Survey to an unknown cave on the west coast of the Island. He set a brisk pace for some of the younger spelunkers who followed him while he searched for a cave he discovered in 1910 and revisited in 1930.

He didn't find that particular cave but found another nearby, named Sinking Creek Cave by the expedition.


CORRESPONDENCE
Steve Knutson of the Oregon Grotto writes that he and other members of the Oregon Grotto would like to come up for a joint trip to Cascade Cave in April or thereabouts. Any takers that early in the year?

From Fred Darvill, Mt Vernon, Wash.
On Saturday, September 5, 1964, I had opportunity to further explore the cave that I found last year between the Railroad Grade and Meadow Point. We were able to remove sufficient boulders from the entrance to get one man into the cave, He reports that it extends in a chimney downward about 20 feet and then extends latterally into a room and that further chimneys can bee seen extending from this area. Because of a lack of headlamps and other equipment and time, we were unable to explore further, but I think that the initial exploration shows promise. I would be happy to guide you to the area or take in other speleologists or provide data as to the exact location of the cave. I was able to get some slides showing the cave location this time, and these will be available to you also.

From William Gustafson, Los Angeles, Calif.
During the summers of 1961 and 1963, I worked on Vancouver Island and Quadra Island. B.C., with a UCLA geology professor and came across several small caves in the East central Vancouver Island area. Unfortunately, my superior was not interesced in caves at the time so I rarely had time to study them in detail.

They are all formed in the Quatsino limestone of Upper Triassic age which is several thousand feet thick. One of the best exposures of the complete section is found near the head of Iron River about three miles southeast of Upper Quinsam Lake (about 15 miles southwest of Campbell River). I have partially explored three small caves in this area, one of which has captured the water of Iron River which now flows through it. Other caves can be found on Greenstone Creek $2 \frac{1}{2}$ miles west of Stratheona Dam, in the Paterson Lake area, on Memkay River (at the end of the present logging road), and several small caves of Quadra Island near the old "Lucky Jim" mane. I have heard reports of several openings at the mouth of Phillips Creek west of Buttle Lake.

We have never found any large caves but I am sure that they are there. Many would-be cave entrances have become filled with glacial till and gravel and much of the area is extremely overgrown and difficult to travel through. If you would like more information on locations and descriptions I would be most happy to send them to you although my information is very sparse.

NEWSPAPER CLIPPINGS
From The Portland "Oregonian", Januaxy 24, 1965
QUARRY HOLE ACTS, LOOKS LIKE BABY VOLCANO
Vancouver, Washington It looks and acts like a baby volcano, but it isn't.
It is a hole in the ground that occasionally emits hot vapor.
It is situated along a ridge at the Smith rock quarxy about six miles east of Vancouver near Highway 830.

Quarry owner Howard Smith discovered the phenomenon this winter when he saw vapor coming from a pile of boulders at the rim of the quarry. The vapor felt hot compared to the cold winter air. When tested, the vapor turned out to be a constant 5 ? degrees no matter what the outside temperature was.

The size of the hole has not been determined because the boulders obscure all but the opening, about two feet in circumference. Smith promised he would further explore the cavity when better weather cames.

Del Snyder, chief geologist for the Portland District, U.S. Army Engineers, offered an explanation of the phenomenon. He said the earth is elastic, much more so than most persons believe, and air from the hole apparently is being forced out when outside air pressure goes up. It is as a giant barometer, he said, with the air pressure forcing the earth together and that in turn forcing the air out. He said the mean temperature of the earth in this area is 56 to 58 degrees. Therefore the air coming out of the hole at 5 ? degrees fits this theory.


The author, Clarence L. Hronek, of Victoria, an ardent spelunker ('one who makes a Shell Cave. Mr. Hronek and studying caves'), is seen against the calcite flows of Egg Shell Cave. Mr. Hronek believes in having extra light when in a cave, which can include a head lamp, a flashlight and a Coleman lantern.

## Horne Lake's Wonder Caves

By Clarence L. Hronek

OVER $\Lambda$ PERIOD of nine months, from November 1962 to July 1963, four visits were made to the Horne Lake caves on Vancouver Island by the B.C. Cave Hunters, consisting of Leagh Hamber, Bruce Nicolls and Wayne Kelly, of Victoria, led by the author. Purpose of the visits was to map Lower Horne Cave, study insect life in the caves and make general observations.
These caves were brought to the author's attention by Miss S. Reid, a B.C. Automobile Association member.

## History

The caves were well known to oldtimers in surrounding districts who first heard of them from the Indians. Indians from the east coast of Vancouver Island were frightened of the caves as they were supposed to possess evil spirits. An Indian trail passes near the caves and was used by West Coast Indians on the warpath attacking the East Coast Indians. This is as told to C. H. Grant, of Royston, by Indian Chief Nim Nim.

Mr. Grant was in the caves in 1908, and in later ycars observed that Thompson and Clark Logging Co. had dammed up the cave water as a supply for steam donkeys. He estimates that the Indians knew of the caves for at least a hundred years.

In the spring of 1939, the caves were re-discovered by Albert Heighes, of Victoria, and George Hemsworth, of Royston, who at that time were living in Comox. They staked out the area as a mineral claim, since specimens in the area surrounding the caves showed high mineralization of copper and antimony. The two men made their discovery widely known as Horne Lake's Wonder Caves.
Main Horne Lake Cave was surveyed May 8 and 9, 1957, by C. P. Lyons and R. H. Ahrens of the provincial government, and their map is on file with the Parks Branch, Department of Recreation and Conservation. Seventyone acres of Block 272 were approved on September 3, 1957, for use of the general public.

## Location

The three caves are near the 500 -foot elevation on the northwest end of Horne Lake in a gully where Qualicum River (not Little Qualicum River) runs through and then emptics into Horne Lake at approximately Latitude $49^{\circ}-21^{\prime}$ and Longitude $124^{\circ}-45^{\prime}-30^{\prime \prime}$ in Block 272. Main Horne Lake Cave is at the end of the gully. Keep on the same side you entered and follow this side to your left and you will come to the
cave. Lower Horne Lake Cave is 500 feet further, on the other side of the. gully. To get to this cave, cross the gorge on a big fallen $\log$ and proceed right. Crawl Cave is 400 feet to the right of Lower Horne Lake Cave, around the bluff at a slightly higher elevation.

## Access

I advise using Map No. 92-F-7, east and west half, Horne Lake, Scale $1 / 50,000$. Location of the caves is shown in Block 272 on west half. These maps can be obtained from the De partment of Lands and Forests, Geographical Division, Room 108, Parliament Buildings, Victoria, for a fee of 60 cents per half.

These caves can be gained by way of Government Road or a logging road, both gravel all-weather routes in good condition. For permission to use the logging road, write to the Superintendent, Olympic Logging Company, R.R. 1, Qualicum Beach. This permission will not be granted during the dry season.
I advise driving to the hamlet of Dunsmuir, which is eight miles northwest of Qualicum Beach off the TransCanada Highway. The logging road is to the left of Dunsmuir and Government Road is ahead. If you take the logging road, drive for 11 miles, passing Spider Lake on the right side and Spider Lookout on the left. At the stop sign, proceed straight over the bridge past the federal fisheries pumping station, go under the power line and take the first left turn, then take the first right turn and park your car. Walk up the hill for one-tenth of a mile. At the first turn in the road you will see a path on your right; proceed down it and you will be in the cave area.

If you take Government road, drive for five and three-tenths miles. The first mile and a half is wide, the remaining three and eight-tenths is very narrow. When you come to the stop sign, procced as above.

## Type of Entrance

The caves are in a limestone body that runs north and south at the west end of Horne Lake. Thick vegetation overlies the area, making it difficult to find new caves. The three known cave entrances are at the base of a cliff. Main Horne Lake Cave has a 16 -inch, slotlike entrance. Lower Horne Lake Cave has an overhang with a walk-in holetype entrance. Crawl Cave has two crawl-type entrances. On the top of the cliff one can see Horne Lake, with an island, to the left.

## Main Horne Lake Cave

Entrance to Main Horne Lake Cave is gained by a series of winding passages.

The cave was 350 feet long, but the last 50 feet is impassable due to blasting in the surrounding area. There are calcite flows and galleries with stalactites and stalagmites which have also suffered damage because of the blasting.

Near the 300 -foot mark in the cave there is a room on the right with water raining from the roof. This is the main water supply which flows out of the entrance. There is a six-inch sloping crevice to the left that a small stream empties into, thus changing the flow of the main stream.

## Lower Horne Lake Cave

We mapped the cave with compass and chain and placed the map on file with the Parks Branch, Department of Recreation and Conservation, Parliament Buildings, Victoria. Unknown to our group the cave was mapped on January 6, 1963, by Western Speleological Survey Group. The cave is 140 feet long and 40 feet high at its tallest point. There are calcite flows and galleries of stalactites and stalagmites, which have been damaged by previous visitors. Water enters at the far end of the cave from a pool. Further exploration of the cave calls for SCUBA equipment. I recommend late August or early September for this type of exploration, as chances of entering more rooms are greater the lower the water level. Fossils were found near the far end of the cave.

## Crawl Cave

This cave consists of two entrances and two passages with no calcite areas or water, with narrow passages on the right and left sides, extending for about 30 fect. They are crawl-type passages, two to three feet high and three to five feet wide.

## Egg Shell Cave

This cave was found July 2, 1963, by the author accompanied by J. S. Ford, of Lake Cowichan. I have named it Egg Shell Cave because of the hollow sounding floor. To locate it, pass Lower Cave and follow the path to Crawl Cave until you see a path on your left proceeding up the cliff. Follow this path until you see bare limestone on your right. Walk past the bare limestone a little way, then turn towards it and you will see two crawl-type entrances about 15 feet apart, one 10 feet higher than the other. The upper entrance is a small hole with a calcite floor. Once inside, you will be able to stand upright. The lower level is 13 feet long and the upper is 28 feet. Both are connected with a room 12 by 12 by 6 feet high, which contains a few small stalactites.

On August 10, 1963, we revisted this cave for the purpose of cracking open
the floor, hoping to find more passages and rooms. To our disappointment we found that the hollow sound is due to a thin calcite deposit over mud.

I advise using the upper level to enter and the lower to exit, as this is the easy way of moving equipment.

## Insect Life

On November 20, 1962, we made observations of insect life in Lower Horne Lake Cave. On exploration of the cave we found the ceiling and walls covered with black hairy spots of approximately a foot in diameter. Upon closer examination these spots proved to be masses of 'daddy long legs' surrounded by crickets, apparently in a state of suspended animation, which
when touched became re-animated, falling and scattering.

The crickets are approximately seven inches long from the tip of the antennae to the end of the hind legs. Antennae measure three inches, body and head one-half inch long by about one-quarter inch wide, and the legs making up the rest of the seven inches. Their feet are fish-hooked to enable them to cling to cave walls. Body appears black when viewed in cave, but upon removal we found the bodies to be transparent pink.

## Fossils

We found a fossil in Lower Horne Lake Cave. About five inches long and one-quarter inch deep, it appeared to be ribbed and was dark brown in color.


The Horne Lake Caves were re-discovered in 1939 by Albert Heighes (right), of Victoria, and George Hemsworth, of Royston. They are seen at the entrance to the lower cave.


