



THE CASCADE CAVER

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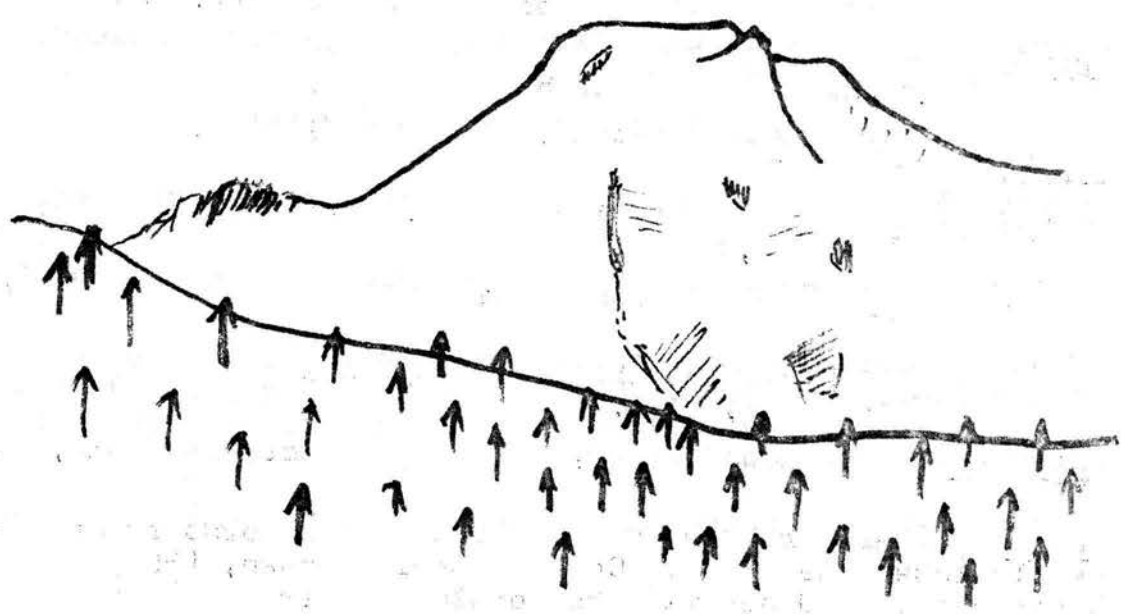
VOLUME 20, NO. 1-3

JAN-MAR 1981

INSIDE:

NWRA REGIONAL MEET AT CONCRETE
COMING LABOR DAY WEEKEND

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ALSO:

RECENT ST. HELENS TRIPS

THE CASCADE CAVER is published ten times per year by the Cascade Grotto of the National Speleological Society. Subscription rate is \$6.00 per year. Full Grotto dues (voting membership) are \$7.50, and family memberships (not including subscription) \$1.50. Make payments to Grotto treasurer Alan Lundberg, 19221 38th Pl. NE, Seattle, WA 98155.

CONTRIBUTIONS to the Caver are welcome. Send articles, trip reports, trip plans, letters, clippings, recipes, cartoons, etc. to Leonard Hargiss, 6151 S. 125 St., Seattle, WA 98178. If you want your contribution returned, please include a stamped, self-addressed envelope, or give me a call before a regular meeting and I can bring it.

Editor: Leonard Hargiss Printer: Ed Crawford

COMING EVENTS:

Field Trip Coordinator: Geary Sanders, 763-0361

August 8-9: Windy Creek Cave area. Hopes of new easy approach dashed, but this cave is worth the bother. Bob Brown, Elbe 569-2724

August 15-16: Black Mountain, near Canadian border. Call Bob Brown, Elbe 569-2724.

August 22-23: Trout Lake lava tubes, carpenters needed. Call Bob Brown, 569-2724, Elbe.

September 3-8: NWRA Regional Meet at Concrete. See article, this issue.

October 3-4: Lake Wenatchee, Soda Springs cave hunting. Contact Bob Brown, 569-2724, Elbe.

October 9-12: Papoose Cave, Idaho. Contact Bob Brown, Elbe 569-2724.

October: Gardner Cave in October when the Boundary Dam maintenance people lower the river. Contact Craig Hansen, (509) 446-4065. Craig and Dave Jones will be working at Gardner Cave until after Labor Day. They can use help digging and cave-hunting.

November 26-30: McLoughlin Canyon Cave. Mapping and cave hunting trip. Call Bob Brown 569-2724, Elbe.

There will be more trips to Mt. St. Helens this summer and fall. To enter the area, cavers must sign a waiver for the Forest Service. Contact Bill Halliday, 324-7474, Seattle.

LATE BULLETIN -- this just in via the grapevine -- Hellhole Cave on Cave Ridge is OPEN! This is a serious vertical cave, no place to learn rope technique the hard way. If you are interested in a trip to Cave Ridge, call Geary Sanders at 763-0361 or Leonard Hargiss at 772-4346; there are sure to be several trips up there in the next few months.

FURTHER STUDIES IN THE MOUNT ST. HELENS CAVES:

MARCH 7 AND 8, 1981

by William R. Halliday, director, Western Speleological Survey

On Friday night, March 6, Clyde Senger and I were greeted at the Oregon Grotto Executive Committee meeting with big news. The supervisor of the Gifford Pinchot National Forest was offering considerably improved access for Western Speleological Survey studies in the Red Zone if we accepted his proposed wording. I typed an acceptance immediately and we turned it in at the St. Helens Ranger Station next morning. The improved access began to pay off immediately. The morning was cloudy with occasional showers, and we could not have entered the Red Zone under the old regulations. Now, however, we were able to proceed to Ape Cave, install new stations, measure tephra accumulations at old stations, and continue farther up-tube than ever before -- until we lost radio contact with the cars. Also we were able to observe the nature of rain-saturated tephra and fresh alluvion for the first time, and this provided new insight. Surprisingly little moisture is needed for the stuff to begin to hydrate and flow. In addition, we had our first look at the upper end of the lava cast area, winding up as far south as the entrance of Lake Cave. Here, the Hopeless Cave mudflow has caused much more aggradation on both sides of the lava cast area than we had expected, but the lava casts and the entrance of Lake Cave are in an "island" in the middle of these new alluvial flats. Only small local mud tongues were seen in the lava cast area itself. The once-beautiful moss gardens here, however, were very badly damaged by the ashfall. On road N816 nearby, and in the Lava Cast Picnic Area, grainy mud was as much as three inches deep but no gullying had occurred. Where the wet mud is thrown up into ruts, it quickly dehydrates and becomes stable.

In the main passage of Ape Cave, the floor at the base of the metal ladder had the appearance of newly-washed gray sand. Accumulations in this area since June 1980 were 1.1 and 1.7 cm at stations 3W and 3E, and 0.7 cm at station 4. This material evidently had entered through the Main Entrance as a result of torrential runoff in its small catchment area. It is sufficiently similar in appearance to pre-1980 tephra that it was difficult to trace. However, its distribution appeared much like what we found in January 1981, and did not appear to extend as far down-tube as station 5. Between this area of aggradation and station 5, several small ingresses for what appeared to be very small patches of 1980 tephra were noted, much as in January 1981. At station 5W, 1.8 cm had accumulated since June 1980.

Near the lower end of the main passage, considerable tephra appeared to have accumulated recently in the stream channel in old tephra. Four new stations were emplaced here. Station L4 is the lowest, beneath the overhang of the lava diaphragm at the end of the corridor. Stations L2E and L2W are about 30 feet up-tube, in the most prominent part of the silt trap formed by the cave's topography here. Station L4 is a little farther up-tube, in a narrow point of the stream channel where two distinct beds of pre-1980 tephra are clearly visible.

Next we turned to the midportion of Ape Cave, especially the part beneath the Hopeless Cave mudflow. Conditions were little changed from January 1981. We emplaced three stations here.

Station 1.1 is in the first sizable mudpuddle up-tube from the main entrance, well beyond the large breakdowns. Station 1.2 is in a larger area of accumulated mud, at prominent graffiti: "Patty". Station 1.3 is considerably farther up-tube, past The Narrows, in a mud flat at the edge of a pond behind the lava dam here. This was the farthest limit of shouting distance past the farthest point of radio communication.

On the surface near Ape Cave, the most impressive changes since January were north of the parking lot, west of road N816. Here the new alluvial flat is much wider and more prominent. The Hopeless Cave flat also appeared more prominent. Aggradation had not progressed significantly down road N816 toward the main entrance of the cave, due to a slight elevation in the road.

Below Ape Cave, the road showed increased undercutting, and local flats on the east side of the road were larger than in January. None of the changes in this area, however, were as dramatic as in the area along this road near the Lava Cast Picnic Area. Here, mud ponding had increased dramatically along the north edge of the road.

Next day, we briefly visited the part of Ape Cave between the upper entrance and station 1.3; also we quickly checked the short section between the upper entrance and the upper end of the cave. Radiocommunications were maintained from road N818 to this part of the cave except for a few dozen meters on both sides of station 1.3. This entire part of the cave appeared essentially free of residue from the eruption. The only distinct post-eruption feature was a small half-cone of ash which had slid downward along the wall beneath the east edge of the Skylight.

The group then proceeded north to "the Upper Caves". In the area of the N818 mudflow and alluviation, dramatic additional changes were noted. Rocks many centimeters in diameter were found wedged between trees well above the stream gullies.

Sand Cave was visited for the first time since the 1980 eruptions. (In some of Clyde Senger's earlier writings, this is called "Camp Cave".) Here we found that the west tongue of the N818 mudflow was spilling laterally into its lower entrance, with accumulation of much mud and vegetable debris in the small room at the base of the entrance pit. From this room it had flowed in both directions in the cave, forming a mudflat in the main passage, and also into the impassable lower crawlway. Multiple water levels were seen as much as a foot above the present floor. Two stations were emplaced here; station 1 about 1 m into the down-tube crawlway and station 2 in the mudflat between the two entrances of the cave. This cave and its vicinity have been an important grylloblattid habitat, but none were seen.

Proceeding northwest along the remains of road N818, we found that additional cut-bank erosion and aggradation had occurred since January 1981. A prominent new levee had formed, curving around a flat on the south side of the road. At Gremlin Cave, the gully leading into the northwest corner of the lower entrance sink had enlarged, and an eastern tongue of the mudflow was curving around the sink and spilling into its eastern edge. In the lower entrance room itself, 4.1 cm had aggraded at station 1 since January and 3.2 cm at station 2. Station 3 was unchanged. Plant debris had accumulated on the wires at stations 2 and 3, showing high-velocity streamflow.

As a result of the newly improved access for speleological study, investigations in Gremlin Cave were extended to the Formation Room. Here, large quantities of a stratified, till-like slurry were found between the two crawlways which converge in this room. Its maximum depth was not determined. A misstep proved it to be more than ankle-deep, with a sandy crust two or three centimeters thick. A thin mud welled up from the footprint and flowed over the crust for more than a meter. Two stations were emplaced here: stations 4 and 5 for this cave. Considerable tephra appeared to have entered this room from the other channel, which follows a crawlway from beneath the main part of the Gremlin Cave mudflow. This area can be reached as a result of the new access regulations, and will be an area of future study.

An unexpected and unwelcome discovery was made between Gremlin Cave and Spider Cave. Two resurgences of watery mud were found on the northwest slope of the closed depression containing the entrance of Spider Cave. The quantity of mud was not alarming, but it was clear evidence that the Gremlin Cave mudflow is working its way toward Spider Cave through subterranean channels too small for human entry. These and another resurgence found later upslope from Flow Cave appeared to have been under hydrostatic pressure. On the surface, the mudflow had not advanced since January 1981, but below Gremlin cave its bulk appeared much larger.

The Flow Cave mudflow resurgence is about 100 m upslope from the upper entrance of this cave. It had formed a tongue which had coalesced with local mud tongues in a small catchment basin here, and was draining directly into Flow Cave. Time did not permit observations in the cave.

At Little People's Cave, mud and grainy alluvion was entering the cave from the N818 mudflats. A quick look indicated that much mud now was in the entrance room and was entering the crawlway beyond. This cave will be a site of priority studies in the future. Its protection by a temporary sandbag barricade has been recommended by Jim Nieland, and after temporary doubt, I concurred.

Participating in the field work on March 7 were Clyde Senger, Dale and Dave Foes, Steve Paulsen, Don Denbo, Rick Pope, Becky Taylor, Dean Paul Kenty, Kathy Block, Mary White, Patricia Halliday, and Mike LaLonde. Don Krehbiel and Fred Reed of the Clark County Amateur Radio Club provided field radiocommunications, with Helen Krehbiel manning the base station. On March 8, participants were Clyde Senger, Fred Stone, Dave Foes, Mike LaLonde, Roger and Patricia Silver, Mary White, Patricia Halliday, Becky Taylor, Steve Paulsen, Andrew Foord, Wally Bosshart, Joel Skok, and Leonard Hargiss. Don and Helen Krehbiel provided the field radiocommunications and Oran Ewing (N7ASX) manned the base station. Their assistance is gratefully acknowledged.

1981 JULY 4 WEEKEND MT. ST. HELENS STUDIES

by William R. Halliday

Most of the work at Mount St. Helens on the July 4th weekend was by Cascade Grotto members, but Dave Foes came along on the 5th to uphold the honor of the Oregon Grotto too. He also showed up at the St. Helens Ranger Station on the 4th, not having gotten the word that we were going to be working outside the Red Zone that day. You're much appreciated, Dave!

On Friday, July 3rd, we also had a reporter and a photographer from the Longview Daily News which wanted an article on the current status of Ape Cave and what we are studying there. It will be interesting to see what they decided was especially newsworthy. Speleologists in the field party included Clyde Senger, Chuck Coughlin, Charley Anderson, and Mark Vining -- all the way from Texas. Clyde worked mostly on the surface, with his rods that measure the depth of new aggradations in the cave area. Radio people included Don and Helen Krehbiel (W7PLF and WB7TKZ), Bob Neville (WA7ZHT) and George Milner (WB7RDE) -- a delightful and compatible crew.

First efforts included routine surface and spelean reconnaissance and measurements at our various stations in Ape Cave. The most dramatic finding was that the lower part of our trench near the lower end of Ape Cave had caved in since Memorial Day Weekend. Not much drama for the newspapermen. Also it turned out that the Gifford Pinchot National Forest had piled rock and rubble on the levees of sand and silt they had scraped off of road N816 in the Hopeless Cave mudflow area. This will have the effect of channeling future mudflows over Hopeless Cave and away from the main entrance of Ape Cave as long as the levee isn't over-topped. If it is, the work seems likely to funnel the future mudflow straight down the road toward and into the main entrance. There was evidence of some stream flow in Ape Cave since Memorial Day but I haven't tabulated the results yet.

During part of this time, we sent Charley and Mark high on the lava flow, with George (WB7RDE), to study the mudflows around the Utterstrom's Caves area. They missed one bit of fun: a Skamania County Deputy Sheriff evidently got the word from a spotter plane and dropped by Ape Cave thinking that he had some trespassers. He was quite polite in asking if we had a permit, but seemed surprised that we did, and also that we had radio communications with the car higher up. He was a good sport, though, and posed with his van for a photo.

Later, we moved up to the regular parking area on N818 for the upper caves and got together with the others. At Sand Cave, we found much more mudflow material in the lower entrance room, and the main passage now is completely filled just beyond. The entire lower entrance probably will be filled soon. Thanks to the abundance of radio people, we were able to divide forces again. Three of us had a look at the section of N818 where the Gremlin Cave mudflow crosses it. If the U.S. Forest Service were to treat it like they have N816 the mudflow problem at Gremlin and Spider caves probably would be completely resolved. I expect to propose this to them very soon.

We had to cut our studies short that day because I was scheduled to show the Clark County Amateur Radio Club a bunch of slides about our work at Mount St. Helens and the contributions by several of their members. This went very well, and Charley and Mark also showed their photos of some of America's most magnificent caves well into the evening. We slept a bit late next morning, then some of us drove to Woodland and dickered with a pilot to fly us around the cave area and other parts of the mountain, shooting photos like mad. Then Rob Stitt, Bev Harris and I were supposed to rejoin Mark and Charley for a look at the Dry Creek-Christmas Canyon caves in the part of the lava flow outside the Red Zone. Unfortunately we never got together; we saw their car going up a

hill near the parking area but that was all; they hunted for us for hours while we hiked on up the trail hollering our heads off for them. A delightful area, but the caves are small and sharp--so far, at least. And it was hot; it was delightful to cool off by the pools of Dry Creek afterward.

We were supposed to check out the caves west of the Kipuka on Sunday, July 5th, but it began to rain and the bushes were just too wet for the necessary bushwhacking. So we went back to Ape Cave and its vicinity and the area of Little Red River Cave, and did some additional work we had never had time for before. We rechecked the area of the Dug Entrance from outside and took comparative photos of the mudflow debris in the area of the small sinks and caves along the Ape Cave Trail, and I had a look at the mudflow below the Hopeless Cave alluvial plain and the one extending south parallel to Lake Cave. Appearances are deceiving from road N816 in both these areas. Both soon break up into narrow channels with little flood plain. We need to do considerably more checking on the courses of the mud tongues up-slope from the Lava Cast Picnic area especially. Rob led a study group into Lake Cave: no changes.

The wild strawberries were especially good and the first salmonberries were out. We did have time to look into a couple of small superficial caves a few dozen meters down-slope from the Dug Entrance of Ape Cave. One was especially pretty with moss and ferns. It has two entrances and a thin roof; I am not sure it has ever been reported or named. Bev suggested the name Leprechaun Cave; has it ever been named before?

Radio crew was George Milner (WB7RDE), Mark Richardson (WA7NTU) and Scott Young (WA7SGZ) on the 5th, with the base station Fred Reed (WB7ZT) on the 5th and Don Peter (WA7NFE) on the 3rd. Mike Erame (a new Cascade Grotto member) joined Rob, Bev and myself on the 5th after the others had to go home.

The next trip to the Mount St. Helens cave area will be the weekend of August 8-9. Please call me if interested. We need more help in the field.

ACCIDENT REPORT: CASCADE CAVE

by Leonard Hargiss

On a recent trip to Cave Ridge May 17, Andrew Foord and I led a group of nine participants, five of whom, including the victim, had outdoor experience, and seven of whom were caving novices. All had hard hats, adequate clothing, and light; some had handheld lamps, but as we were planning to visit only the non-technical caves (Red and Cascade) it was thought not to be a serious problem. Red cave proved to be snowed under, so the group entered Cascade Cave.

Andrew and three of the party, including one with hiking experience, were at the decision point after the third of the series of short chimneys near the entrance. The fourth member of the party, Chuck Schwartz, 21, slipped off clay-coated rock while negotiating the chimney, apparently catching his right arm on a projection and falling about four feet. It was quickly apparent that he suffered a dislocated shoulder; the only other injuries seemed to be two minor abrasions on the forehead.

Chuck was in pain and scared, since he realized the difficulty of attaining the entrance, fifty feet up through a series

of tight chimneys.

We gave Chuck a Tylenol #3 (codeine) tablet and let him rest and quench his thirst while it took effect. Then we started out, with me boosting him from below, Andrew hauling on Chuck's good arm from above, and Chuck pushing with his feet. The journey took maybe half an hour. Fortunately, Chuck is not large; those familiar with Cascade Cave may imagine squeezing out the tight entrance on their LEFT sides.

Though Chuck was experiencing persistent, throbbing pain, the hike out went fairly smoothly, and Chuck was in better spirits. Andrew backed down ahead of Chuck on steep snow, holding his ice axe between them. We hit an annoying snag when Andrew telephoned the local operator from Alpentel; he/she called Shepard Ambulance in North Bend instead of contacting the local sheriff, who surely could have handled the situation faster. Chuck was treated at Overlake Hospital; I understand he has since recovered and has recently gone backpacking.

NWRA REGIONAL MEET.

SEPTEMBER 3-8, 1981

Location: Fourteen miles north-northwest of Concrete, Washington. The camping area is located on the south slope of Mt. Baker (10,778') in Mt. Baker National Forest, and is adjacent to North Cascades National Park.

Directions: Most people will be approaching the area from I-5. Take State Highway 20 east from I-5 at Burlington; about 5 miles east of the town of Hamilton turn north on the Baker Lake Road (If you cross the Baker River, you've gone too far). Turn left in about 11 miles onto Road #3725, 1/8 mile past the "Entering Mt. Baker National Forest" sign. From here follow white pie plates with red Xs to the camping area.

Camping area: The camping area is located at the end of a spur road adjacent to a large stream. This is not an established camping area. There will be a large (30' x 40') covered group area with a nearby campfire. Registration and information will be open from 8 AM to 8 PM September 3-8. An outhouse will be provided near the group area. There are many small tent sites, room for several trailers or campers, three or four large tent sites, and room for several vans. The site is at the south end of one of the Mt. Baker lava flows, providing lava cave hunting and blueberry picking. Close at hand are many hiking trails, and streams and lakes for fishing (\$7.25 for non-residents).

Caves: Information for self-guided cave tours will be provided at the information and registration trailer Sept. 3-8. The area has many small limestone caves in addition to the ones listed below. Windy Creek trail guides will be available Sept. 5 and 6 at 6 AM [advised -- ed.], 8 AM and 9 AM at Registration.

Windy Creek Cave: Longest limestone cave in Washington State, 3057 feet. A horizontal stream cave with sporting dome pit climbs. Trailhead is 15 min. drive from camp with a 2 hr. cross-country hike. Please sign in and out at the registration trailer. The cave is cold (33 F.) with a few formations -- please BE CAREFUL around the

few formations there are.

Dock Butte Karst: An alpine karst area with many sink-holes and one small cave (Resurgence Cave, 250'; very sporting). The Dock Butte Karst trailhead is 15 minutes from camp with an easy 45-minute hike; great views of Mts. Baker and Shuksan.

Jackman Creek and Ramsey's Caves: Two 300' limestone caves near Concrete, a 35-minute drive from camp. Both caves are adjacent to roads -- no hiking. Easy caves.

Big Four Ice Cave: Two hour drive from camp, near Monte Cristo ghost town [Mountain Loop Road and Monte Cristo roads washed out; must take Mountain Loop Road east from Granite Falls -- ed.]. 500' ice cave requires a 15-minute trail hike; very nice cave.

There are many other known caves within two hours' travel time of camp; get information at the registration trailer; Also many good cave hunting areas. [For those with glacier training, the steam caves at 9000' on Mt. Baker are easily accessible; this would be a long day or short two days -- ed.]

Schedule: Several cavers will be arriving early evening of Sept. 2 and staying on until mid-afternoon Sept. 9. Why not plan on taking a little extra time and make this year's NWRA meet a real vacation?

Sept. 3: Set up camp and hike to Dock Butte. Campfire 9 PM.

Sept. 4: Windy Creek Cave, leave camp 8 AM. Most people arrive early evening; campfire 9 PM (dry out coveralls).

Sept. 5: Self-guided trips all day, with guided trips leaving camp at 6, 8 and 9 AM for Windy Creek. Campfire and slides 9 PM.

Sept. 6: Same as 5, except NWRA Board Meeting and General Meeting 7 PM at camp. Pot luck and Barbecue starting at 5 PM. Bring something to share and meat to broil [groceries at Concrete -- ed.].

Sept. 6: Short trips, closed NWRA Board meeting; some may have to leave.

Sept. 7-9: Caving and cave hunting.

Each night at 9 PM there will be a campfire in the group area. BRING YOUR SLIDES FOR A CHANGE -- we will obtain a generator. Stay a few extra days.

Registration fees: One person -- \$3.00
Family -- \$4.00

Registration discount of \$1.00 if person or family brings 12 or more slides, showing caving since Sept. 1, 1980.

-- Bob Brown

MAY 19 MEETING

Lars-Erik Astrom, the President of the Swedish Speleological Society, gave a stimulating talk on (what else?) Swedish caving. As in Washington, karst areas in Sweden are largely in inaccessible alpine areas, forcing cavers to seek diversions in more convenient talus caves. Slide scenes included realistically posed G.I. Joes in sub-human sized crevices.

The Swedes make imaginative use of modern technology, though. Astrom and friends lowered a small TV camera into a four-inch well after a karst-area farmer reported intersecting a stream passage. The team dropped ping-pong balls into the opening to put the stream into visual perspective, but all the balls clumped together in an eddy. In another episode, the group packed a large pump and a kilometer (!) of electrical cable into a commercial cave, to lower the water level in a sump. This ambitious project failed when an unexpected rainstorm occurred.

IMPORTANT!

The Caver needs material from you spelunkers, particularly trip reports. Remember, if you are reporting on or planning a trip, you can reach far more people through the Caver than you can at a monthly meeting. Please send trip reports, information on coming trips, etc., to: Leonard Hargiss, 6151 S. 125 St.; Seattle, WA 98178.

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MEETING AUGUST 18!