

October 1992

Alaskan Caver, Volume 12, No. 4, October 1992

Curvin Metzler

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The ALASKAN CRAFTER



VOLUME 12

NUMBER 4

OCTOBER 1992

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Membership is open to all interested in Alaskan cave discovery, exploration, description, survey, mapping, photography, hydrology, morphology, biology, geology, history, speleogenesis and other speleean processes, conservation, management, adventures, and the fellowship of Alaskan cavers. Annual dues are \$15 for individual or \$20 for family membership. Add \$8 to dues if overseas airmail postage is preferred over surface. Institutional subscriptions are \$20 per volume (six issues).

Dues are due on January 1 and are sent to the Treasurer (address below), payable to Glacier Grotto. Those joining for the first time between October 1 and December 31 will be considered paid through the following year. Dues status is indicated on the mailing label. Meetings are held in Anchorage, Fairbanks, and Ketchikan; see the back page for information regarding meeting times and locations.

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(All telephone number area codes are 907, Alaska, unless otherwise specified.)

Cover: A waterfall flowing down through a hole in the limestone of the Lisburne Formation, at Atigun Gorge in the Brooks Range, Alaska. Photo by Curvin Metzler.

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President's Corner: Elections Coming Up?

by Dr. Julius Rockwell, Jr.

So far the Nominating Committee has been unable to propose any candidates, with one single exception.

Members of the Nominating Committee should canvas all Glacier Grotto members in their areas and report to the Committee Chair. It is suggested the President and Secretary live in the same area; the Vice Presidents should live in their respective areas; the Treasurer could live anywhere.

All members interested in serving the Grotto should plan to do so, some time. It is a great opportunity for personal development. We need to fill the first six offices listed on page 2

of this issue. It would be a shame to let the Grotto go down the tube. It is a lot easier keeping a Grotto going than it is to start a new one. I hope this lack of response is the result of a lack of communication rather than a lack of interest in the continuations of the Grotto. I will be out of the picture after December 31. Please contact one of the Nominating Committee members. An officer has to be an NSS member, but that is easy to correct if you are not--ask me for an NSS membership application.

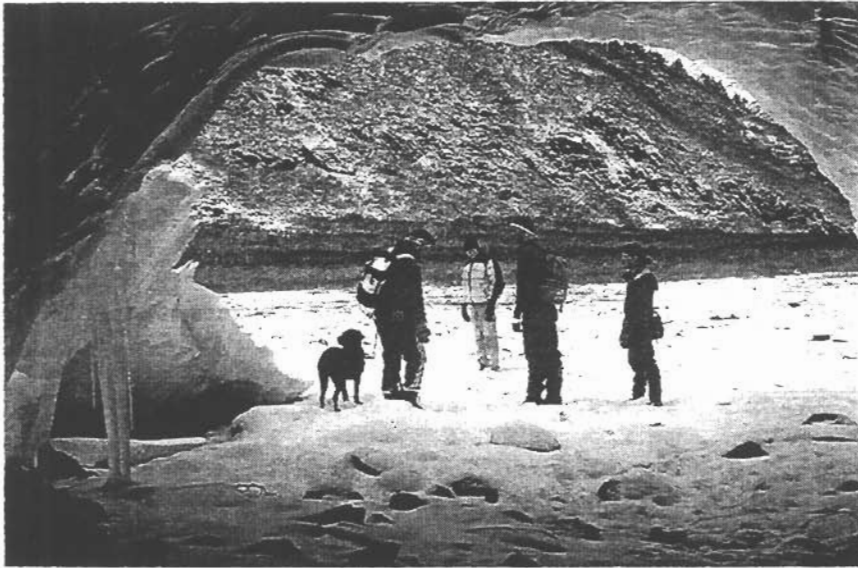
The following Glacier Grotto and NSS members in good standing have agreed to serve on the Nominating Committee:

Sam Dunaway (Chair)	3440 W 86th Ave #8	Anchorage, AK 99502	(907) 248-4037
Mike Mauser	1466 Carr Ave	Fairbanks, AK 99709	(907) 456-6953
Paul Sandhoffer	PO Box 9-1333	Anchorage, AK 99509	(907) 344-3259
Gary Sonnenberg	1377 Pond Reef Rd	Ketchikan, AK 99901	(907) 247-1559
Bob Bastasz	PO Box 2417	Livermore, CA 94550	(510) 443-9624

Grotto News

- Alaska Geology, newsletter of the Alaska Geological Society, Inc., is publishing our meeting times and places. This contact and service was initiated by one of their newsletter editors, Evelyn Goebel (who may be reached at 564-5367). Their next meeting will be held on Wednesday, November 18, at the Anchorage Hilton Hotel. Glacier Grotto President Jay Rockwell will be speaking on the Prince of Wales Island Expeditions.
- The Alaskan Caver 11(3) earned an Honorable Mention in the 1992 NSS Graphic Arts Salon, Photographic Category, for the photograph by Jack Massie of a glacier cave in Byron Valley. The Graphic Arts Salon recognizes the efforts of the NSS internal organizations by judging the newsletter covers submitted to the Salon (see September 1992 NSS News 50(9):229). This is the third consecutive year in which we have received Honorable Mention. Last year Bob Hallinen earned us the award with his photograph of a Byron Valley glacier cave (see the 1992 NSS Members Manual, Part 2 of the June issue, NSS News 50(6):29).
- Two Honorable Mentions in the 1992 NSS Cartographic Salon went out to Carlene Allred for her 1991 maps of Dragon's Breath Cave and El Capitan Pit (see NSS News 50(9):230).
- It was also announced in the 1992 NSS Members Manual that Carlene Allred, Kevin Allred, and Julius Rockwell, Jr. were made Fellows of the National Speleological Society.

Glacier Caving Season is Here Again!



Looking out from inside a glacier cave.
Photo by Curvin Metzler.

It's that time of year again! Temperatures are low enough that, when there's no avalanche danger, the caves under glaciers and snowfields are safe for entry. Glacial caving can prove to be quite enlightening to even the most experienced caver. The forms and patterns in glacial ice often closely resemble those in limestone solution caves. The interesting difference is that these forms appear and disappear in only fractions of the time in glacial caves that they do in limestone.

If interested, call Jay Rockwell (277-7150) or Curvin Metzler (333-8766) for info. □

Meadowbrook Mystery Cave idea by Richard Hall

Can you identify the mystery "cave"?
Hints and clues are supplied; fill in the
blanks from the letters choices below:

B H L M P S T W

- "Cave" opened in New York in 1881
- You need boots, gloves, and helmet
- Don't forget to bring your __allet
- Custom __addles will be provided
- Other equipment needed; bring __ack
- Must communicate using __orse code
- The __all goes on; we make our goal
- If you're good, try the sport __olo
- If too wet, plan on __ater activity
- Oddly enough, horseplay is allowed



Scientists Unearth Rare, Ancient Pictographs in Southeast Alaska

by Danielle Allen, Bureau of Land Management

[Reprinted with permission from Alaska Land and Home Magazine 1(8):6-7, August 1990. The periodical is now published under the name of Alaska Living Magazine; for subscription information write to 801 Barnette St., Fairbanks, AK 99701.]

The trip had taken six hours. After leaving Haines, archaeologist Julie Steele and her fellow researchers travelled by truck, air boat and finally on foot. Hauling gear up and down those hills the last mile had been hard. Now, 70 miles inland, they had reached their destination, a series of jumbled boulders--ancient rock shelters.

They were in the Chilkat Valley near the Canadian border, but within the 500,000 acres managed by the Bureau of Land Management (BLM) near Chikoot Inlet in Southeast Alaska. This is where the Chilkat group of Tlingit Indians may have sought refuge centuries ago. Steele, the team leader and archaeologist with the BLM's Anchorage district office, was hoping to find proof.

At the end of the long trek they found three caves within a few miles of each other.

Darkness had set in, but they could make out paintings on one cave wall.

"We built a fire to light up the pictographs," said Steele, "because I wanted everyone to feel the mystery of the place...I even spent the first night sleeping in the cave." She wanted to experience what it would be like to live there.

The caves would be their work site for the next six days while they painstakingly searched for signs of early human activity.

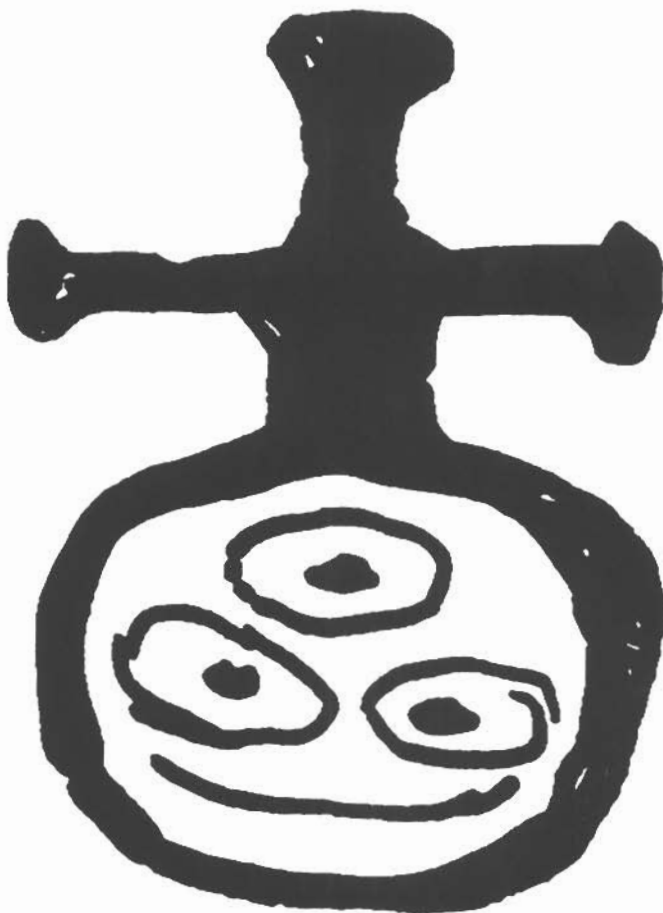
In one cave they found some wooden planking and some cooking stones for heating containers of food. In another cave there was a small structure of poles and spruce boughs lashed together with spruce-root twine. "This twine is thought to pre-date contact with the West, since manufactured twine was an early trade item," said Steele. One

cave had a lot of cracked-up bone that had been cooked. But they found no tools in any of the caves.

Finding pictographs was especially exciting for Steele, since they rarely occur in Alaska. Near or just below the surface is where most of the pictographs were located. Most of these red paintings were indecipherable, but, said Steele, "one looks like killer whale crest, stylized, looking head-on. Or it could be a face."

She was able to identify one drawing as an animal, possibly a mountain goat or sheep.

Two years ago recreation guide Al Gilliam alerted archaeologists that he had seen rock shelters containing pictographs and Native artifacts. "I have to



This cave drawing and others made centuries ago in Southeast Alaska have excited anthropologists.

give him a lot of credit for doing things right," said Steele. "He'd been careful not to disturb things, and then he was out there working with us and volunteering his time."

Helping Steele were archaeologist Bob King of the BLM state office, Anchorage District realty specialist Bob Lloyd and natural resource specialist Dave Kelley. They quickly became adept at moving large mounds of dirt with small trowels.

The group was working in an area of rock outcrops, huge cottonwoods, birch, alder, and white spruce, interspersed with moss and lichen. It was like working in a huge Japanese rock garden.



Possibly a goat.

Although the dig didn't meet Steele's fantasy of being a shamanistic site, the pictographs, the pole structure and the burned bone, charcoal and cooking stones they found are plenty of evidence to warrant further excavation of the sites. Steele plans to have the bone and twine carbon-dated.

More important, Steele says, "I think we're going to find some answers to questions we've had for a long time." □

Patient's Notes from the Cave Rescue

by Dale Chase and Stacey Larsen

[Reprinted from B.C. Caver
6(3):16-17, May/August 1992.]

We arrived at S-10 at 7:30 and walked up to the Inside Out entrance to Thanksgiving Cave. A short rest at the entrance got even shorter when we heard (imagined?) the voices of our rescuers. Into the cave, Stacey was dropped off upstream from Pot Tee with a sleeping bag and exposure bag, while Dale proceeded on to April Pole Aven, an accident looking for the right place to happen. Found it. Sitting at the bottom of the waterfall was cold, drafty, and noisy. Recovered enough to move up onto the ledge. Still cold noisy and drafty.

Sit down: sweating.

Sit down plus five minutes: comfy.

Sit down plus 15 minutes: cooling noticeably.

Sit down plus 30 minutes: shivering.

Got out the trusty \$3.00 space blanket from my helmet, used the duct tape to fashion a cocoon, with the carbide light underneath.

Space blanket plus ten minutes: stopped shivering.

Space blanket plus 30 minutes: comfy again.

Sit down plus 90 minutes: discovered by BASH team; more space blankets and a warm body to share them with; toasty.

THE SPACE BLANKET AND CARBIDE LIGHT WORK!
Don't leave home without them.

Discovery plus two hours: medical team arrives.

Discovery plus three-and-a-half hours: packaged.

Discovery plus five-and-a-half hours: cave totally rigged and stretcher moving.

Discovery plus nine hours: outside.

Discovery plus eleven hours: in the pub at Gold River, buying beer for the rescue team.

Stacey was discovered uninjured shortly after Dale and escorted out. Stretcher from April Pole Aven to Main Entrance in three-and-a-half hours! Anyone who's been involved in cave rescue will appreciate what a sharp team it was. Given half a chance, we can and will bring 'em out alive. □

Beaver Cave and a Karst Window

by Julius Rockwell, Jr. and Kathy A. Tonnessen

On August 6, 1990, during POWIE IV, we left the Forest Service El Capitan Work Center to check on a cave discovered by Rockwell the previous summer (POWIE III). The cave is on the west bank of the lower portion of El Capitan Creek. El Capitan Creek flows south into the El Capitan Passage, southwest of El Capitan Peak, on the north end of Prince of Wales Island, Southeast Alaska.

In the portion of the creek crossed by Forest Service Route 15 (barricaded at that time to through traffic just beyond the Work Center), the canyon is 15 to 20 feet deep and has little gravel. In many places the steep canyon walls come straight down into deep pools, especially on the west side of the creek. The walls and floor are composed primarily of marble or limestone. We observed a number of resurgences along the canyon. Also, some water is known to enter fissures in the canyon walls.

Since the stream was high, we went across the bridge and continued up the Calder Road to the first spur on the right. We continued to the end of the spur and then north into the ten- to 15-foot high thickets in a clearcut. Following the sound of the creek, we picked up a small stream and continued along its banks down to the main creek bed. We emerged from the thicket at a broad, handsome marble bend—a break in the canyon wall.

At 1345, a cairn was placed on a downed branch on the west side of the creek to mark the spot, and we proceeded downstream on a bear trail. The stream was too deep to wade at this point. Soon we crossed a two-inch-wide crevice in the moss, running at right angles to the trail. Upon pulling back the moss, we found a fissure six to 18 inches wide and four to six feet deep. The east end was a crack in the creek canyon wall; the west end was pinched off. There was gravel on the bottom of the fissure. It would have been possible to enter but we did not. Our headlamps showed a length of about 18 feet.

At 1355, we continued along the bear trail above the creek. At 1405, the trail turned west away from the creek. Tonnessen was leading and cried out: "There's a hole here!" And sure enough—it was a beautiful karst window.

The window was 50 feet west of the edge of the west canyonwall (measured by tape). It was four feet wide (east to west), twelve feet long (north to south), and 14 feet deep (to the top of the moving stream at the bottom of the hole). It had vertical sides, the east side being mostly soil and the west side a limestone cliff face about 20 feet higher than the east side. Across from the top of the east side of the window, on the west side of the cliff, there was a very small cave out of which trickled a small stream, wetting the beautiful varieties of mosses and ferns lining the sinkhole.

At the bottom of the hole was a stream flowing north, opposite from the flow of the creek. The water was about two to two-and-a-half feet deep, with a few small fish. The only possible tie-off point for a handline was an eight- to ten-inch hemlock tree seven to eight feet from the edge of the window. The passage at the bottom appeared to go in both directions, with air passage above the water. Unfortunately, our twelve-and-a-half-foot handline may possibly have been able to get us into the pit but not out of it.

The location of the karst window is marked by a large fallen log, three to five feet in diameter and about 80 to 100 feet long, jutting out over the creek southeast from the window.

Crossing the fallen log, we continued south along the bear trail until it led us back to the stream. Along the trail was eloquent evidence of berry-eating bears, including a bear bedding spot (near the top of the cliff)—comfortable and with a nice view of the stream. We admired the choice of such an aesthetic resting spot. We continued downstream along the shore till we arrived at our destination.

At 1445, we reached Beaver Cave, located adjacent to the creek. We spent about an hour removing brush from the tributary stream that flowed out of the cave. We wanted to lower the water level in the pool in the cave entrance. Dam materials included old tree parts, freshly cut willow saplings, mud, and pieces of limestone—all mixed together. After lowering the water level of the pool about a foot and a half, Tonnessen checked the surroundings and found two little muddy trails leading off into the forest. This "brush" that we were clearing out was evidently a beaver dam fashioned around a large, submerged log. Apparently we were destroying the dam of a family of troglodytic beavers—no less than fellow cavers! So we decided to stop and devise another method of gaining entrance to the cave in another year.

There are two parts to the cave, with entrances about 20 feet apart. The right-hand entrance is under a submerged shelf, about two feet above the bottom of the pool. Out of this opening there was significant water flow. This pool is in a much larger shelter cave, which is about twelve feet high and 20 feet wide and has flowing water which is colder than creek water. The level of the pool was about six feet above that of the stream.

To the left of the shelter cave and even with its top, there is a small opening. The entrance is about four feet high and three feet wide over a two-foot pile of breakdown. The rocks above the entrance are loose. Inside, beyond the breakdown, the cave extends back eight to ten feet; there is a cross passage three feet high, eight feet wide and 16 feet long that is at about the

same level as the pool of the shelter cave and which dips at about 40 degrees down to a sump. The ceiling of the entrance chamber is made of roots and matted vegetation. Rockwell investigated the larger cave and determined that the pool was an obstacle to further travel.

At 1600, we left Beaver Cave and proceeded downstream along the cliff top until the brush became too formidable. Then we turned west across the clearcut to intersect the road, using a distinctive mountain top as our reference. The going was tough across the overgrown clearcut in the heavy rain (which was no worse than when it was not raining). We finally reached the end of the spur to the road and then back down the Calder Road to the bridge.

There, at 1645, we observed a large resurgence coming from Salmon Fry Cave, stopped and drank the balance of our water supply and snacked on dried apricots and peaches. We concluded that walking along a stream in a limestone canyon in karst country was an excellent way to find caves. On the final mile to camp, we saw five bald eagles in a single tree at the mouth of El Capitan Creek. They were waiting for low tide when the salmon would come in. At 1715, we arrived back at camp.

In conclusion, we feel that for the present Beaver Cave is not at risk but should be left alone, and that the karst window should be dropped and surveyed before we recommend action concerning its management. However, its significance lies in the fact that there are few caves that serve as beaver habitat. It is possible that such use is unique to this location. □

Saltpeter Mining in East Tennessee

In a letter to Jay Rockwell, Marion O. Smith (NSS 9164) announced the availability of his 48-page booklet entitled Saltpeter Mining in East Tennessee (published in Maryville, TN, in 1990), for

a cost of \$4 postpaid from the author:

Marion O. Smith
P.O.Box 8276 UT Station
Knoxville, TN 37996 □

Summer 1991 Cave Search and Exploration Reports
story and photos by Curvin Metzler

Wishbone Hill

Late in the afternoon of May 10, Kristian Sieling and I drove to Palmer, where we met up with Carl (E) and Mary Rose Clark. We drove two vehicles the rest of the way to Sutton and up the Jonesville Road toward Wishbone Hill. Our goal was to investigate the rumor of deep cracks and potential caves on the top of Wishbone Hill. Once we began climbing the snowcovered spiraling road to the old coal mines on top, we all rode together in the jeep. Carl did an excellent job of getting us as high up the hill as possible, which minimized the distance we then had left to walk.

After hopping out of the jeep, we tried walking on a direct path through the woods. But soon we returned to the road, which we followed past a pond and on to an eroded canyon in view of the peak. We reached the base of the upper cliffs after a short hike, but the deep snow made progress slow the rest of the way, approaching from the back side. So we decided to walk around and attack the hill from the sunny south side instead. Since Carl and Mary Rose were running out of time and soon needed to leave, we split up. Kristian and I made a quick attempt to reach the top, as the Clarks leisurely returned to their jeep.

It turned out that we had to walk much further than expected, through some woods and down to cross a gully or two. But eventually we reached a flat section which lies between the two peaks at the top of Wishbone Hill. We searched the flat area as well as along the sides of both peaks, but the snow was too deep for any cracks to be visible. In fact, we could not even determine where they might lie underneath the snow.

We did find a few interesting rock forms, such as holes and shelter caves left as the conglomerate rock was worn away by erosional forces. But nothing beyond minor pseudokarst was found, and taking a look into the deep cracks would have to wait until a later trip.

Gull Rock

On the weekend of May 11 and 12, I led a hike for the Mountaineering Club of Alaska to Gull Rock. It was intended to be an overnight backpacking trip with a chance to do some caving in sea caves nearby. Oddly enough, it was also six days shy of the 11th anniversary of an outing (with MCA members) led by Richard Hall to the same location! (See The Alaskan Caver 5(3):7, May/June 1980.)

Early on Saturday morning, eight of us drove around Turnagain Arm to Hope. From the day-use parking lot at the end of the road (Porcupine Campground) just beyond Hope, we started our hike to Gull Rock. The trail is a fairly level path following the shoreline from Hope west about five miles to Gull Rock. It ends on a small, rocky peninsula connected by a narrow, cliff-bound neck.



View from Gull Rock sea cave (1983).

Although the trip was scheduled to take advantage of the low tides for the month, the time of day of these tides was unfortunately not so ideal. By the time we had arrived at our destination, the tide was coming in--so it was already too late to visit the caves. The next low tide was in the middle of the night, and I could not get anyone else interested in getting up for it. And finally, the group decided to start the hike out early, meaning we would not be able to wait for the daytime low tide during our last day there.

Pribilof Islands

[Story and maps on pages 16 through 21.]

Sheep Mountain

While backpacking in the Talkeetna Mountains, high water levels prevented me from crossing a stream, causing me to end my week-long trip after three days. Since I was close to Sheep Mountain, I decided to search for the gypsum caves I had heard about before returning home. On May 25, I went on a hike up one of the stream gullies, attempting to reach the ridge top. Along the way up, I spotted a small cave on the right; it was around 15 to 25 feet in both length and width.



A gypsum cave on Sheep Mountain.

White Mountains

On Friday, June 14, after discussions with a few folks at the Bureau of Land Management office in Fairbanks, I drove to mile 40.4 of the Elliot Highway. There I parked my vehicle and began the long (25 mile) hike in to the western end of the White Mountains. Starting at 6pm, I reached the elevation of 2000 feet at around 8pm, and caught views of the distant White Mountains from 2200 feet of elevation half an hour later. A thermometer that I passed along the trail displayed 52 degrees Fahrenheit. I hiked through a saddle at about 2400 feet elevation at 10pm, and decided to make camp after hiking down from a treeless ridge at 11pm.

I broke camp at 7:45am on June 15, passed BLM survey marker T7N R2W AP3 at 8:15am, marker T7N R2W AP7 and wooden structures at about 10:30am, and had lunch before reaching another saddle (and a small rocky mound populated by marmots) at 11:15am. The next couple of hours consisted of stumbling across fields of tussocks and fighting through forests of spruce. By 2:30pm I reached Beaver Creek, which I attempted to follow for a couple of hours before giving up with blistered feet at 4:45pm.

In the morning of June 16, I made numerous attempts to wade across Beaver Creek, only to turn back because of high water again and again. Finally, after giving up and starting to head back out, I saw a place which looked good just upstream from an old cabin. At 11:30am I had finally crossed successfully, and by 1:15pm I had reached the base of a limestone ridge and broke for lunch. I then dropped my heavy pack, took some surveying gear, and searched the southwest end of the ridge for caves.

The first cave found (ignoring very small shelters) was only ten feet long, ten feet high, and 3.5 feet wide at the opening. There was a small chimney five or ten feet above, and a series of holes (only one of which appeared to go) just uphill in the next crack. The second cave followed a crack for 25 feet, 15 of which were covered. It was ten feet

high and averaged four feet wide (five feet at its middle). (See maps on pages 14 and 15.) I returned to my pack at 5:45pm and continued heading northeast.

After hiking up to avoid a gully, I continued searching for caves, walking along the ridge top in hopes the wind would cool me down and blow off a few of the mosquitoes which were almost driving me crazy. Neither the headnet nor the thick flannel shirt I was wearing offered total relief from the bloodsucking insects. Instead, I became so thirsty from the hot arctic sun that I was drinking meltwater from small patches of snow.

At about 8:30pm, I continued hiking northeast along the ridge, running into a few Dall sheep and a couple of patches of spotted ladyslipper orchids. I found a pit six feet deep containing a pool of water four feet deep. I also discovered a potential pit, which was full of snow to a depth of at least 15 feet. At about 30 minutes after midnight, I came down off the ridge and started searching for the Windy Gap cabin. I searched in vain until 2am, locating only two porcupines and a moose with a calf--but no cabin. I finally got to sleep at around 4am.

In the morning of June 17, I broke camp at 11am, taking a look up Limestone Gap before heading back out the 30 miles

to the road. At 1pm I started back up the ridge; when on top, I watched a storm on the next ridge and beyond. When winds started picking up and lightning threatened, I checked out some shelter caves on the back side (southeast) of the ridge. I surveyed and photographed a few caves and continued along the ridge.

Two caves were surveyed; the first was a chamber about five feet high and six by eight feet in area containing a chimney on one side which led to another chamber about five feet in length and 3.5 feet in width and height. The other cave was eight feet wide and long, and seven feet high, with a side passage following a crack for seven feet. At 8pm I walked down along the side of the ridge heading toward Hermans Landing Strip. At 11pm I crossed Beaver Creek and found a campsite near the airstrip.

On June 18, I broke camp at 11am, headed up the homeward ridge, and made it to the first hilltop at 2:15pm. I reached the edge of a plateau of hills (including the marmot hill) at 3:30pm, and finally stopped for camp in a saddle at 7:45pm. I headed out on the final stretch of the trail at 8am on June 19. The thermometer read 63 degrees Fahrenheit as I walked by, and I reached my car at the end trail at 11:30am.



Entrances to unnamed caves in the southwestern end of the White Mountains.

Brooks Range

On Monday, July 22, 1991, I drove to Fairbanks en route to the haul road and travel into the Brooks Range. An Australian hiker rode with me, and we picked up the third member of the expedition, a German hiker, in Fairbanks. We started up the Elliot on July 23, and by the morning of July 24 had reached the Atigun Gorge near Galbreath Lake and the cave-bearing Lisburne Formation of limestone. Without delay, we headed on into the Arctic National Wildlife Range toward the waterfall (see cover) flowing down through a hole in the rock.



A small cave along the Atigun Gorge.

Hiking toward the waterfall we saw a number of Dall sheep, a nesting pair of eagles, and some crinoid and coral fossils. Later, we spotted a grizzly bear lumbering along up the gentle slope of the canyon. The Australian twisted his ankle that afternoon, so we camped just down the canyon from the waterfall stream. The next day I helped him hike back to the car, where he hitchhiked up to the north slope.

On the way back to camp I heard a whistle, and investigated to find that the German had scurried up a rocky ledge to avoid falling rocks and had stranded himself. I slowly climbed up close to him and was able to guide his footsteps

and talk him down without either of us getting injured in numerous rockfalls. We then moved camp to a place a little further east, up on a ridge overlooking the Atigun Gorge, next to a small lake.

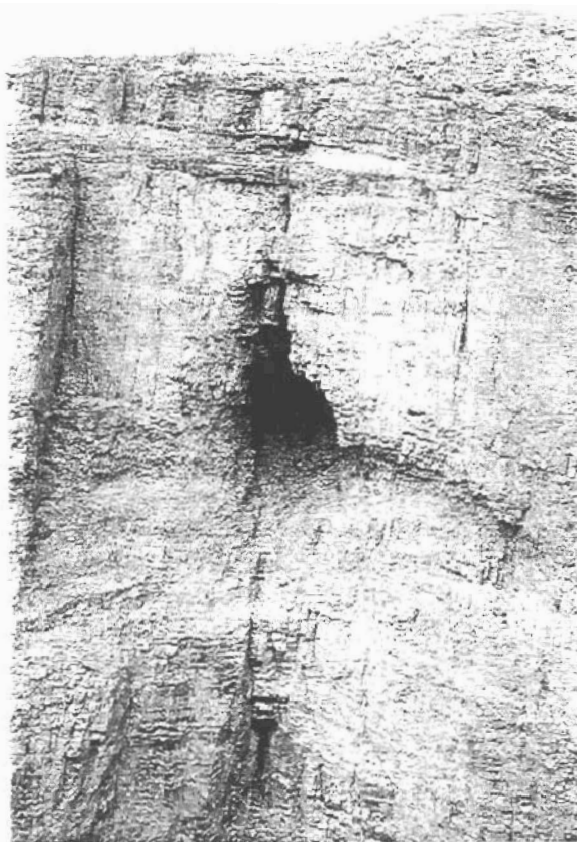
Along the way to the new camp, we had seen something blue down near the river as we climbed up the ridge. Late one evening, after the German had gone into his tent, I decided to go investigate the blue object, which I thought might be a tent. I hiked back down the cliff and noticed a few slide marks that I assumed we had made on the way up. I found that the blue object was actually two objects, an ice chest and a small metal drum.

I turned around to return to camp when something out of the corner of my eye caught my attention. I looked up and saw a mother grizzly with two cubs running together up the slope just across the river and less than 100 yards away from where I was. The mother would run for a little bit, then stop and turn to look at me and watch how I reacted. I was glad that they were running away from me rather than toward me, but I felt a bit stupid to have been caught there all alone, with my bear spray back at camp. I hiked slowly but steadily back up the cliff, realizing then that the slide marks were most

probably made by the cubs sliding down the hill not so long before I arrived.

We spent one day hiking (with only our daypacks) down through the Atigun Gorge toward the Sagavanirktok River. Along the way, we checked out several small openings, but found only insignificant shelter caves and frost pockets. The following day we moved camp, hiking first to the south (slightly east) until we reached a stream. We followed the stream southward until one of its tributaries took us upward and closer to a pass leading to the west.

While crossing one of the streams, which involved taking a few large steps, the German hiker slipped on a wet rock.



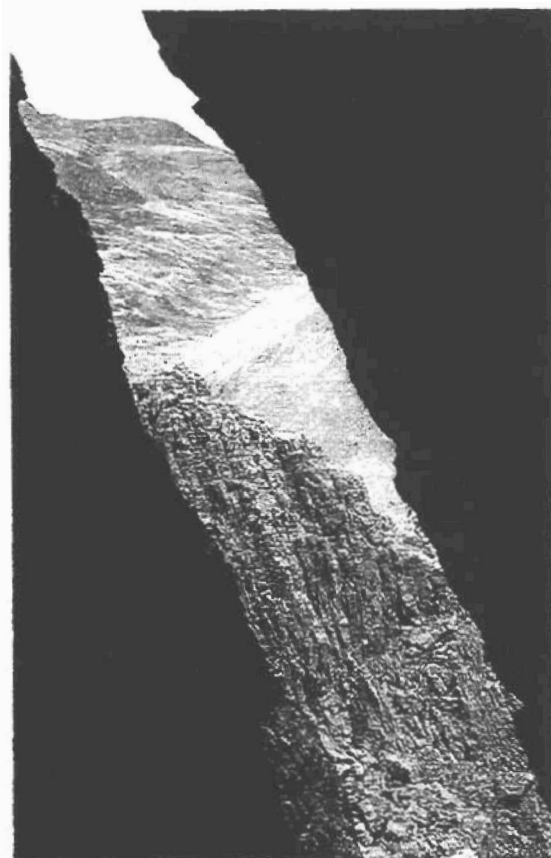
Large frost pocket cave in cliff face.

I turned around to see him laying in the stream! His cotton jeans, the only pair of pants he had brought even after all my warnings and recommendations of wearing wool, were thoroughly soaked. He put on some nonthermal underwear and borrowed my rain pants, but the weather was miserable and I imagine he was also.

As we followed the tributary higher up the mountain, the fog thickened and visibility was too low for us to be able to locate the gully going up to the pass. As we hiked, I kept checking my altimeter watch, and occasionally got out the map and compass to estimate our position. Finally, after reaching a few hundred feet higher elevation than the pass and still heading directly to the south, we concluded that we had missed the gully leading to the pass. We hiked along the side of a ridge, stumbling over boulders in an attempt not to lose much altitude, until we could determine that the pass was probably just ahead and below.

As we approached, we could sense a void hidden in front of us in the fog. Soon we were walking across a wet meadow which took us through the pass to scree fields on the other side. The fog was thinning and beginning to lift, making castle-like cliff faces faintly visible above the accumulation of broken rock. We hiked down the gully to where there was a small valley to the north between two steep ridges almost totally covered with talus of fossiliferous limestone.

We hiked up the rocky valley a few hundred yards until we found a small grass-covered area adjacent to a little brook. Since the spot was sheltered and contained a clear stream, we made it our last campsite. Early the next morning, I was awakened by some sheep walking on a trail near the tent. I fumbled for my camera and took a photograph as they stared and continued walking northward. Going to the north in this valley leads eventually to the eastern fork of the waterfall stream (see cover).



Westward view from a Brooks Range cave.

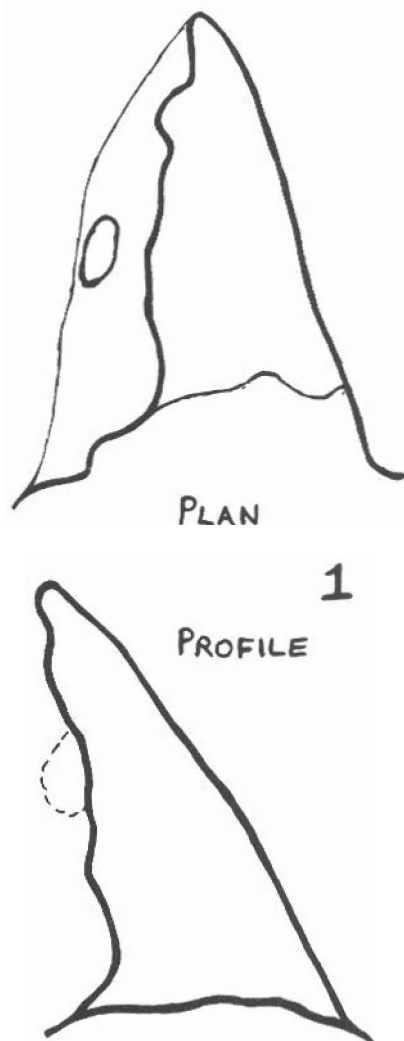


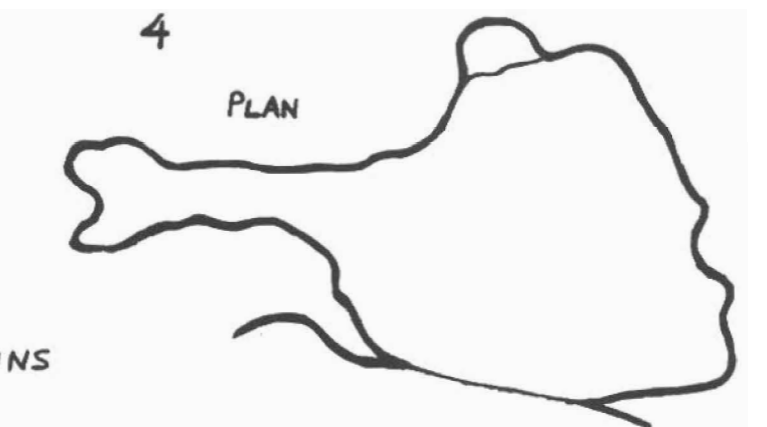
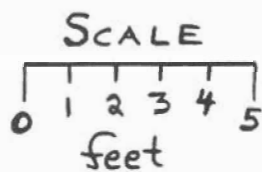
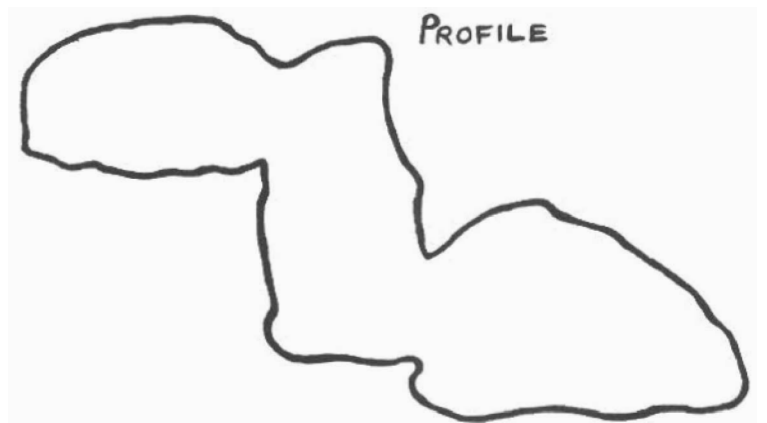
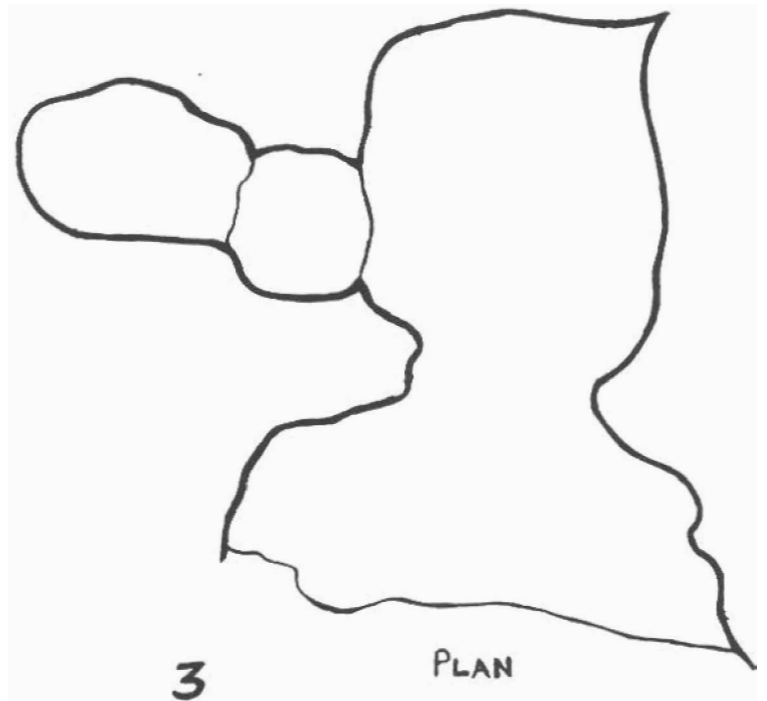
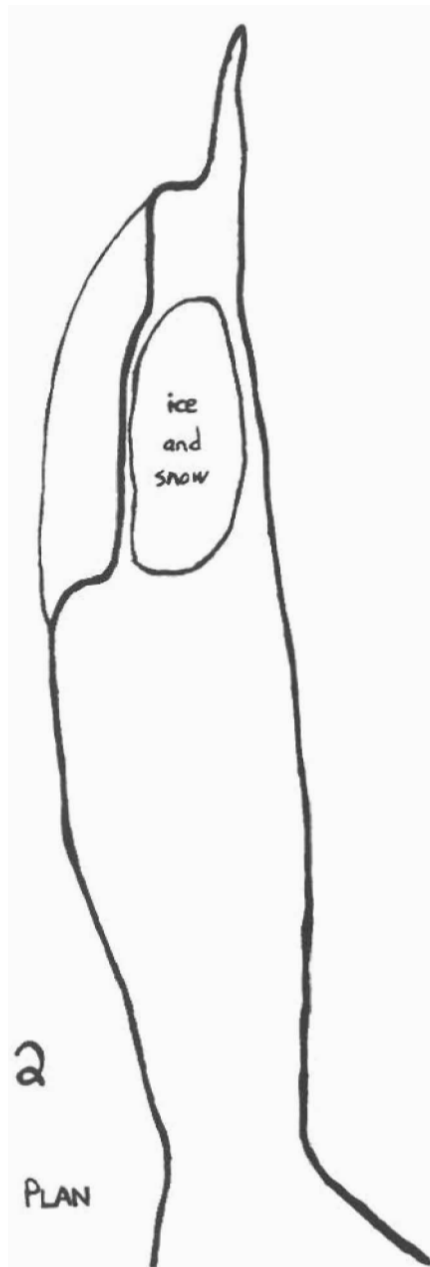
View south from a Brooks Range cave.

After breakfast, I hiked up the talus slope to the east in search of caves, but kept getting distracted by all the fossil corals along the way. Once the cliffs were reached, a number of small caves were located, as well as one very large frost pocket. After the German hiker reached the top, we walked the ridge together all the way to the pass. I found a few small limestone solution caves and some frost pockets along the way. For much of the walk a rainbow was visible, but the sun came out as we hopped down the scree fields. The next day we hiked out and drove back to town. □

Members in the News (Contributions invited)

- Amanda, Carl R. (Jr.) and Carl E. (Sr.) Clark and others helped clean up some of Mammoth Cave, according to John George Vargo's July 1990 article, "Volunteer clean-up work at Mammoth", which appeared in CIG Newsletter 34(7):77-78.
- William R. Halliday's interesting account of a quick week-long trip to Athens and environs, entitled "Greece, 1990", appeared in both the March-April 1990 Cascade Caver 29(3-4):11-13 and the June 1990 Speleograph 26(6):56-58. Included were visits to a famous cave, on Andiparos, which has had renown visitors like Alexander the Great, and to Koutouki Cave, along with well-known Greek speleologist Mme. Petrochilou.
- Buddy Lane gave a program entitled "Caving in the TAG" at the June 1990 meeting of the Chattanooga Grotto, according to Chattanooga Grotto Tagline 3(6):1.





CAVES of the WHITE MOUNTAINS

Surveys and Maps by Curvin Metzler

Pribilof Island Expedition (1991)

by Art Eash

Harvey Bowers, Curvin Metzler, and Art Eash, members of the Glacier Grotto, flew to St. Paul Island of the Pribilof Islands in the Bering Sea to locate and survey caves and lava tubes reported by various sources to be found there. The expedition was authorized by Tanadgusix, the village corporation of St. Paul, as required for any such venture.

We arrived at St. Paul Airport at 2pm on Thursday, May 16, 1991, after a two hour and 15 minute flight on Reeve Air Aleutian. The weather conditions were clear (which was hard to believe on this normally fog-choked island) but very windy. Victor Merculief, Land Manager for the Tanadgusix Corporation picked us up in his Suburban and whisked us off on a short tour of the town area, complete with a short history.

The two islands of the Pribilofs were uninhabited until the late 1800s, when Russians imported enslaved Aleuts to hunt and process seal furs from the mammals who then made an annual breeding visit in uncounted droves to the rocky shores. In the early 1970s the controlled international harvest was halted except for subsistence hunting by natives, destroying one of the few reliable sources of income for the locals.

With the onset of bottom fishing in the Bering Sea, though, St. Paul has become a major port for crab and pollock processing, with tens of millions being poured into capital projects by Japanese investors, some of which pulled out when their stock market crashed. Overfishing in the Gulf of Alaska and southern Bering Sea is pushing the industry into the Pribilof neighborhood. Crab (*opilio*, for now), pollock and black cod are the main source of revenue, with tourism (especially birding) coming on in summer months. About 550 tourists were booked in 1991, including many birders from around the world.

After our baggage (packs) arrived, we headed north to a lava quarry, excavated a few years ago to construct the town breakwater. A substantial new

harbor services a fleet that ranges over most of the Bearing Sea. On the day we arrived, 25 ships were anchored up.

The Bogoslof volcano, high point of the island, sits a couple of miles north of the quarry. (It is an ancient, long-dormant cone--not the active Bogoslof volcano which created an island by the same name further south in the Bering Sea.) We moved in the direction of the volcano, choosing one of very few dry campsites to pitch the "tents". (Harvey and I used a rain fly over bivvy bags; Curvin tented next door.)

The winds swept over the island, unhindered by any large plant life or blocking landforms, blowing steadily at 20 or so miles per hour with gusts much higher. Finding caves was hampered by large patches of snow remaining on the tundra, often several acres in size at this time of year. But temperatures were moderate, around 35 degrees Fahrenheit, and the sky was uncharacteristically blue. We had packed mounds of gear and clothing in expectation of 32.1 degrees and blowing sleet. We were granted a reprieve.

The next morning, we cooked a quick breakfast, packed up the caving gear, and headed for Bogoslof. Hiking over the tundra was difficult, with large volcanic rocks concealed beneath the grasses and heathers. The grasses form tussocks, sometimes a couple of feet high, which topple when stood upon. But we made our way, noting locations of potential entrances to caves and lava tubes as we went. Harvey dropped into one small lava tube a short distance out of camp. The wind continued as we clambered up the slopes of Bogoslof.

On top, Harvey and I scanned the tundra below for evidence of caves, distracted by what must be the best view in the Bering Sea, and finally spy an entrance to the best-known cave on the island. We descended downhill to the mouth, which is a hole in the tundra with three nesting pairs of grey-headed black-capped rosy finches flitting in

and out. Curvin joined us, and we threw on our harnessed and dropped 30 feet to the cave floor via a pair of crossed beams placed over the six-foot access hole. Harvey's prehistoric Gibbs ascenders perform perfectly once again.

Inside, the constant roar of the wind dissipates to near silence. Overhead, broken only by the entrance, is a nearly perfect vaulted ceiling, with polygonal patterns spanning most of the visible surfaces. As we would see in most caves on St. Paul, a reindeer or two had visited this cave before us, as evidenced by the crumpled piles of bones on the floor. The room entered into was 25 feet wide (maximum) and over 60 feet long, tapering to a narrow lava tube network at one end. We judged this to be the cave some botanists had described as having a walk-in entrance (during warmer times) from the side of a nearby crater. Spindrift had filled what appeared to be that entrance on the uphill side. The cave was briefly surveyed and we ascended out into the tempest again.

Outside, finding no other cave entrance nearby, we moved west toward more

volcanic landforms, including volcanic cones. There were fewer tussocks and the terrain was more rocky as we walked westward, but travel was at least as threatening to our ankles. The perfect weather continued, but daylight was waning, so we returned to camp. En route, Curvin descended several very small lava tubes through breaks in the tundra, but none extended beyond a few feet. Each is part of the million-year-old system that has been severely broken up over time.

The next day, the trio headed for Bogoslof again, this time circling the cone for other cave entrances. Two more entrances were descended into, one of which yielded a small, gelatinous worm from wet walls at about 25 feet. A specimen was collected. Tubes repeatedly ended in pinched corners or were nearly filled with sediment, ending probe after probe.

Moving around the volcano and further north we found a herd of reindeer, including a dozen or so calves, grazing on the lichen. Several exotic (or at least colorful and unidentified) lichens



Art Eash and Curvin Metzler inside Bogoslof Dome Cave.

Photo by Harvey Bowers.



Art Eash at Bogoslof Dome Cave entrance.
Photo by Harvey Bowers.

decorated the rock in this low-lying area of the island. Moving yet further north, we could see a ship which had run aground (and has remained stuck another year later). A dune area behind the beaches precludes any more cave discovery, so we migrated past the reindeer, past stickleback-filled Big Lake, and back to the drier, more volcanic areas to the west.

The western shoreline is characterized by sheer drops of columnar basalt, forming perfect, protected nesting sites for hundreds of thousands of birds. Protected, that is, except from the foxes, which were introduced by Russians last century or before, and which prey on eggs and young in summer. Coupled with a disrupted food chain at sea, several avian species are suffering setbacks, including the red-legged kittiwake, whose only breeding site is on this island.

Our goal included walking beaches in search of seacaves, but time was running short, and we walked easterly again toward camp. The beaches on this southwesterly side are rocky and are the site where over half a million fur seals hang out during pup rearing time. Observation decks have been built for subsistence hunters. The grassy dunes behind the beaches are green, unlike nearly all the remainder of the island, as this is the location of the butch-

ering grounds during hunting season.

There were no fur seals that day, with a sole exception. One "beachmaster"—an enormous male—sat on a rocky point, waiting for his harem to show up. Despite federal management efforts, fur seal populations have declined to drastically below historic levels. And populations of the Stellar sea lion, another beach resident, have dropped to alarmingly low levels in addition. St. Paul residents are now participating more directly in management decisions in hopes of reversing the decline, with the much

longer perspective provided by their Aleut heritage.

Back in camp, we dug in for another windy night. We filtered the coffee-colored standing water through a "Water One", which barely operated at such cold temperatures. With just a few hours left on the little Bering Sea paradise, we walked around in the area near camp, still hoping to find another cave or two. Curvin entered a couple more lava tubes, but they all went nowhere. The



Harvey Bowers checking out a lava cave.
Photo by Curvin Metzler.

stars returned, assuring us of another remarkably cold and clear night on an island noted for its consistent fog and rain.

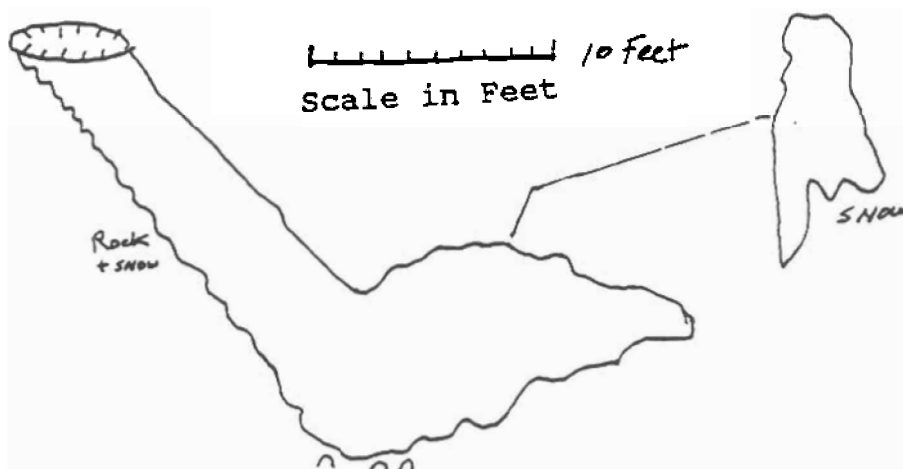
The next morning we loaded up, walked the road to town, visited with the folks at Tanadgusix, and boarded the Reeve flight home to Anchorage. □

[**Author's note:** In August of 1992, I flew with my wife Karen back to St. Paul Island, this time with mountain bikes to take advantage of the excellent roads that circle the island. No camping is permitted without permission, but a stay at the island's one hotel is highly recommended. Our weather again was perfect, with no wind this time. Yet the forecast nearly always favors wind and rain, so even a seasoned camper will welcome a hot shower and a good meal. A bed and breakfast option exists as well. Between the half million fur seals, the over 200 species of birds, and a myriad of flowers on the tundra, this island provides an eyeful wherever you turn.]

[**Please note:** Any expedition on either St. Paul or St. George Island requires prior clearance with Tanadgusix:

Tanadgusix Village Corporation
1500 West 33rd Avenue
Anchorage, AK 99503
(907) 278-2312

During most of the year, no access is permitted to lands off the main roads, in an effort to reduce disruption to wildlife. However, excellent tours are available through either Tanadgusix or the King Eider Hotel, including day trips to some of the best bird and mammal viewing sites anywhere.]



Cave A, St Paul Island, Alaska

5/17/91 sunny, 34 F, 20-25 mph winds

Cave is located on an old lava flow S.E. of Bogoslof Hill. Total length 30 feet. Total depth 20 feet.

Surveyed by
Curvin Metzler
Art Eash
Harvey Bowers

This small cave is located in the bottom of a small sink. this area has a number of collapsed lava tubes. The only item of note in this cave was some clear worms(?) which leave a reflective slime.

Caves of the Pribilof Islands

by Harvey Bowers

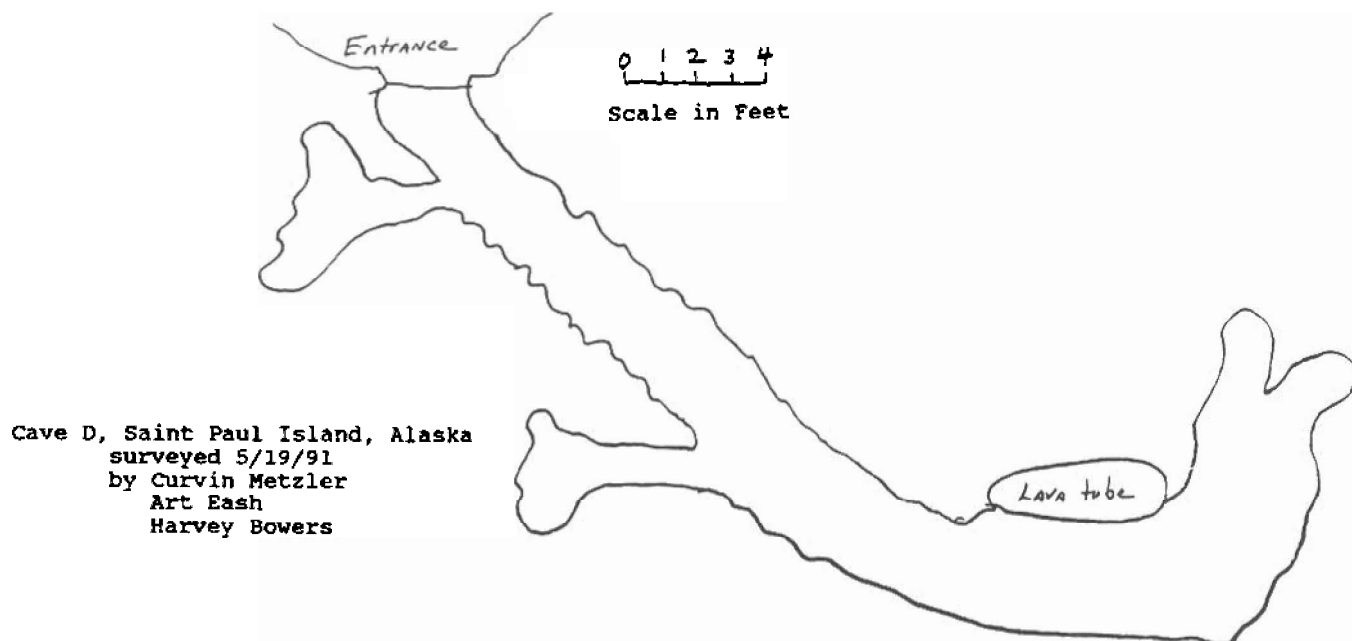
Bogoslof Cave and Bogoslof Dome Cave are located on the south side of Bogoslof Hill on St. Paul Island in the Bering Sea. Bogoslof Cave reports were published in The Alaskan Caver in 1982 (7(2):4-5) and 1985 (8(3):4-7). We had hopes of mapping the cave, but were unable to find it due to snow depth in the adjoining crater. As recently as 1985 this cave was thought to be the longest known cave in Alaska, and to this date is our longest known lava tube.

Bogoslof Dome Cave (we were unable to find a local name to the cave, even though the cave and almost the entire island is owned by local natives) was visited on May 17, with the weather being sunny, 34 degrees (Fahrenheit), with a 20 to 25 mph wind. The dome is entered by a four-foot-by-five-foot pit entrance, with a 21-foot drop to a snow/ice mound on the bottom. The pit is located close to Bogoslof Cave at the edge of a collapsed dome or crater. At the time of our visit, two posts (4x4 inches) were crossed over the pit with two polypropylene (fishing boat) ropes going into the pit. We removed the larger of the two ropes because it looked degraded. The second rope was part of a couple hundred feet of rope coiled by the entrance.

The dome had a nice dome feature with large cracks in the ceiling and

walls. At the entrance pit and the far east side there was a large amount of snow and ice. The cave did not have a lot of features to keep our attention. Noted features were: birds nesting just inside the entrance (which had a large amount of moss); numerous reindeer bones throughout the cave (the entrance had a rotting smell); a small skylight in the middle of the cave (nearly invisible from the surface); and small, clear worms which leave a reflective slime (found at the far west side). We saw the worms in some of the smaller caves; yet this island is the only place any of us had seen such a worm. Also, in the small west side passage there was a strong air current flowing down passage, estimated at 200 to 300 cfm.

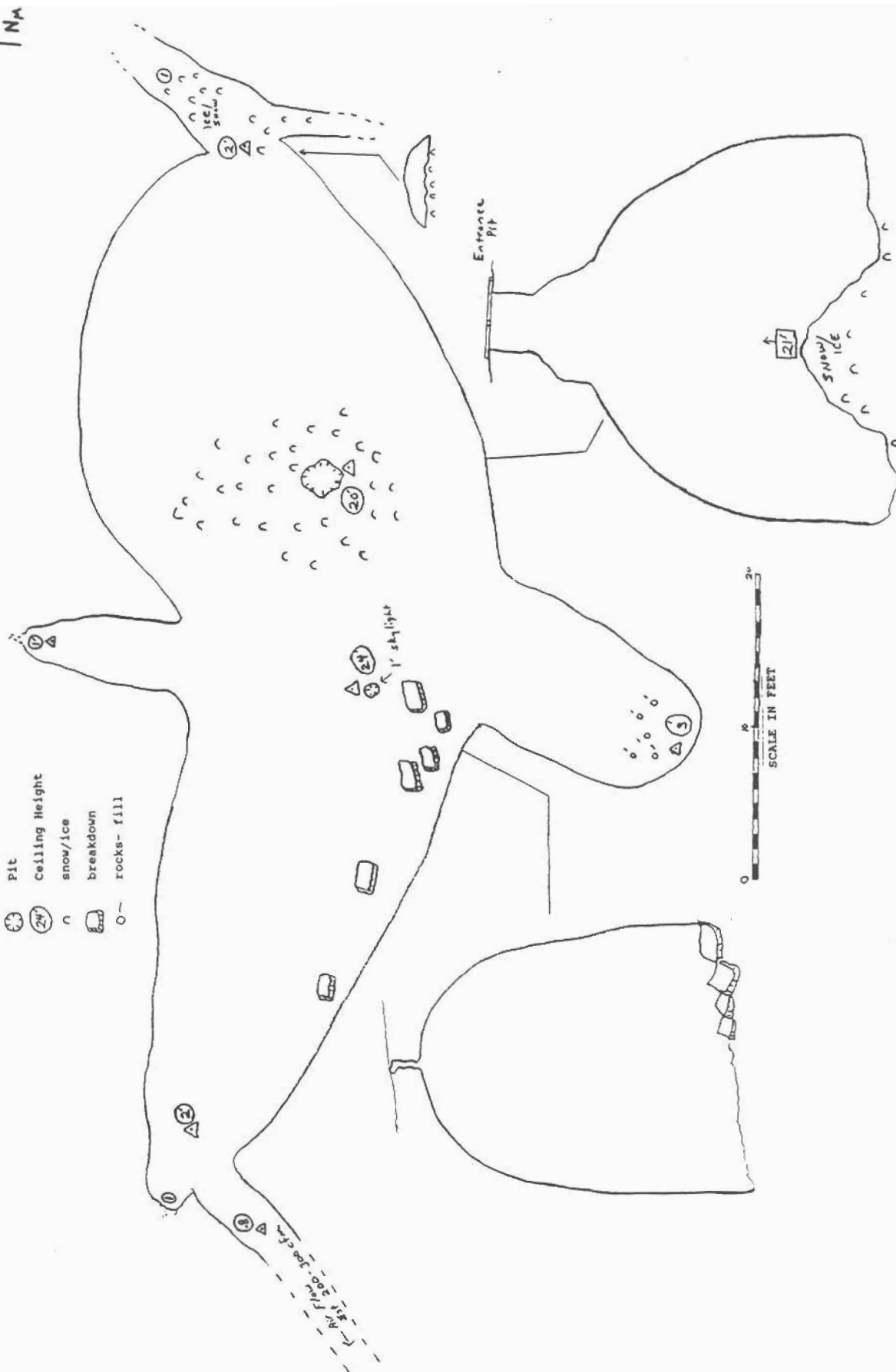
On our visit we located some other small fissure caves. We located one cave southeast of Bogoslof Hill and five others to the east and northeast. All were 20 to 40 feet long, and ten to 21 feet deep. Most had reindeer bones at the base of the pit and some caves had the clear worms with reflective trail. The natives of St. Paul also reported a very interesting creature that can be caught in the crater lake on Bogoslof Hill. From the description it sounded like a trilobite. The lake was frozen at the time of our visit. □



BOGOSLOF DOME
St. Paul Island, Alaska
Survey 5/17/91
By Art Eash
Curvin Metzler
Harvey Bowers

Legend

- unsurveyed passage
- Δ survey station
- 21 Drop Distance
- ⊙ Pit
- 24' Ceiling Height
- ⌒ snow/ice
- ⊞ breakdown
- rocks- fill



★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
A r e a G r o t t o M e e t i n g s
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▣ SouthCentral Area Meetings

SouthCentral Area Meetings usually are held at 7:30pm the fourth Wednesday of each month. However, we currently **are in need of a regular meeting place!** There will be **NO** meeting in November, as a result. And the December meeting will be a **Christmas potluck** at the home of **Jay Rockwell, Jr., 2944 Emory Street, Anchorage, AK 99508, telephone 277-7150.** The Christmas potluck will be held on **Thursday, December 10, at 6:00pm.**

▣ SouthEast Area Meetings

SouthEast Area Meetings will be held at 7:00pm on the **first Monday** of each month. The meeting place is the **Alaska Public Health Service Building, 3054 5th Avenue, Ketchikan.**

▣ Northern Area Meetings

Northern Area Meetings are held in **Fairbanks** by demand; contact **Mike Mauser** at (907) **456-6953** for more details.

D U B S a r e D U E !

It's that time of year again--time to show your support and appreciation for all the news and information which has been collected and distributed via The Alaskan Caver during the past year. If your mailing label shows a 92 instead of a 93, it's time for a subscription renewal, as only **two** issues remain in the current volume. Renew now, so you won't miss a single exciting issue of your favorite action-packed newsletter. Besides, we need the funds in order to produce this newsletter on into next year, so please renew now. Just do it!

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