

December 1995

Alaskan Caver, Volume 15, No. 6, December 1995

Dalene T. Perrigo

Follow this and additional works at: https://digitalcommons.usf.edu/alaskan_caver

Recommended Citation

Perrigo, Dalene T., "Alaskan Caver, Volume 15, No. 6, December 1995" (1995). *Alaskan Caver*. 52.
https://digitalcommons.usf.edu/alaskan_caver/52

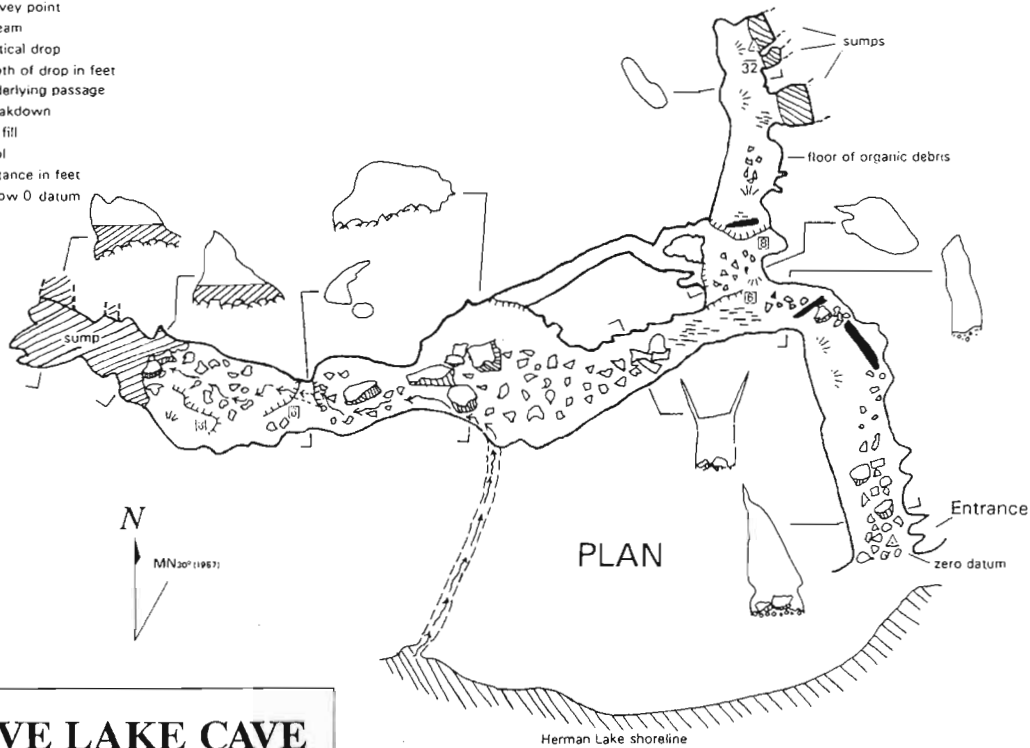
This Book is brought to you for free and open access by the Newsletters and Periodicals at Digital Commons @ University of South Florida. It has been accepted for inclusion in Alaskan Caver by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact digitalcommons@usf.edu.

The Alaskan Caver

Volume 15 Number 6

December 1995

- LEGEND
- slope
 - log
 - survey point
 - stream
 - vertical drop
 - depth of drop in feet
 - underlying passage
 - breakdown
 - silt fill
 - pool
 - distance in feet
 - below 0 datum

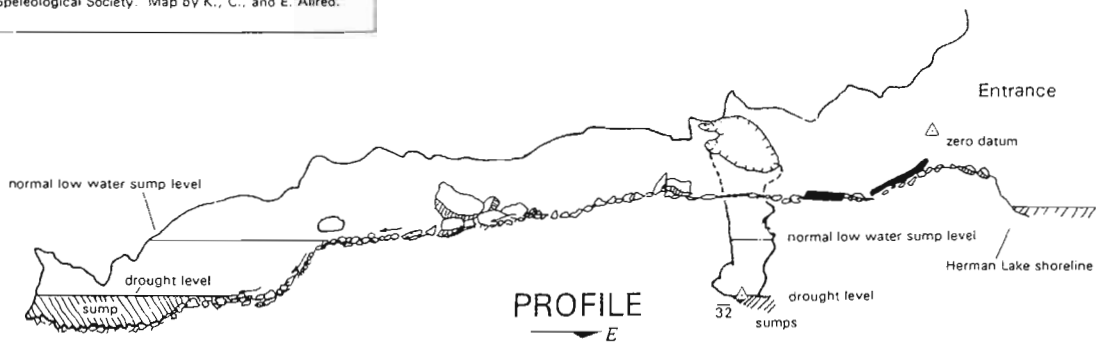


CAVE LAKE CAVE

KLEHINI RIVER DRAINAGE
ALASKA

Surveyed length- 378 feet
Total depth- 32 feet

Compass, inclinometer and tape survey August 9, 1980 and August 10, 1993 by S. Lewis, D. Ziel, C. Allred and K. Allred of the Glacier Grotto, National Speleological Society. Map by K., C., and E. Allred.



0 10 20 30 40
distance in feet

© 1993 by Carlene Allred

The Alaskan Caver

published by the
Glacier Grotto©

1921 Congress Circle, Apt. B, Anchorage AK 99507

Dalene T. Perrigo - Editor

© Copywrite 1995

Volume 15 Number 6

December 1995

Table of Contents

Kasumura Cave Expedition, Part II	1
President's Corner	1
Children become spelunkers	3
Book Review	4
How to make caves come alive	5
Newsbriefs	6
Enigma #198, #159	7
Broken Bus Cave #179, #127	8
Illusion Pit #192	10
Tongass Caves at Risk	10
See the Light Cave #193	12
Monkey Hole #193	12
Thundering Sea Cave #191	14
Letters	16
Northwest Region Divided	18
NSS President needs help	18

Cover Photo: Cave Lake Cave. Map: Carlene Allred

The ALASKAN CAVER (ISSN 0735-0481) is the periodic publication of the Glacier Grotto of the National Speleological Society (NSS). Back issues are available from the Glacier Grotto Secretary for \$2 each.

Materials not copyrighted by individuals or by other groups may be used by NSS publications provided credit is given to the author and The Alaskan Caver. Send contributions to The Alaskan Caver, Editor, 1921 Congress Cir., Apt. B, Anchorage, AK 99507. Opinions are not necessarily those of The Alaskan Caver, the Glacier Grotto or the NSS. Proven errors will be corrected in print.

Annual dues are \$15 for a single and \$20 for a family membership. The Alaskan Caver is included in the membership fee. For an additional \$8, six Cavers will be sent by airmail to overseas addresses. Institutional subscriptions are \$20 per volume. Send dues to Glacier Grotto Treasurer.

- Anchorage Meetings: Call Harvey Bowers for details. (907)376-2294.
- Ketchikan Meetings: 7 p.m. the first Monday of the month at the Alaska Public Health Service Building, 3054 Fifth Ave., Ketchikan.
- Fairbanks Meetings: Call Steve Lewis for details. (907)479-7257

President: Marcel LaPerriere
P.O. Box 9062
Ketchikan, AK 99901
hm: 225-4094 wk: 225-4094

Vice Presidents:

Northern: Steve Lewis
P.O. Box 83715
Fairbanks, AK 99708
hm: 479-7257 wk: 479-7257

Southcentral: Wm. Harvey Bowers
305 S. Bartlett Circle
Wasilla, AK 99654
hm: 376-2294 wk: 376-2294

Southeast: Gary Sonnenberg
1377 Pond Reef Road
Ketchikan, AK 99901
hm: 247-1559 wk: 228-6323

Secretary/treasurer: Alan Murray
312 Mission St.
Ketchikan, AK 9999901
hm: 225-7453 wk: 225-2500

Education: Ward Serrill
PO Box 9318
Ketchikan, AK 99901
hm: 247-9663 wk:

Conservation: Steve Lewis
P.O. Box 83715
Fairbanks, AK 99708
hm: 479-7257 wk: 479-7257

Cave Rescue: Marcel LaPerriere
P.O. Box 9062
Ketchikan, AK 99901
hm: 225-4094 wk: 225-4094

NCA Representative: Dave Klinger
P.O. Box 537
Leavenworth, WA 98826
hm: 509/548-5480 wk: 509/548-5480

The Alaskan Caver: Dalene T. Perrigo
1921 Congress Circle, Apt. B
Anchorage, AK 99507
hm: 344-3290 wk: 522-1096

Tongass Cave Project Director:
Pete Smith
PO Box WWP
Ketchikan, AK 99950-0280
hm: 846-5223 wk: 846-5223

Tongass Cave Project:
Kevin Allred
P.O. Box 376
Haines, AK 99827

Alaska prefix is 907



(L-R) Tim Heaton and Dave Love emerge from Kushtaka Cave during July 1995 Alaska cave exploration. Photo: C. Allred

CALENDAR

March 14, 1996.....Southcentral AK meeting, 7-9 p.m., Elmer's Restaurant (907) 376-2294

June 17-July 12, 1996 Ketchicave 1996, Alaska. (907)479-7257

Aug. 1996.....World Coastal Karst Environments Symposium. Details TBA.

August 1996.....Expedition on Chichagof Island Alaska (907)479-7257

Aug. 3-9, 1996.....NSS Convention, Salida, CO, 5404 S Walden St., Aurora, CO 80015.

Aug. 4-14, 1996.....International Geological Congress, PO Box 823, Beijing 100037, China
Ketchikan Area Grotto meetings are the first Monday, at 7 pm at Ketchikan Public Health Center 3050 Fifth Ave. 247-1559

Alaska Cave Rescue meets each Tuesday at 7 pm, at 819 Forest Ave., Ketchikan. Frequent rope practice sessions. Marcel 225-4094

KASUMURA CAVE EXPEDITION, PART II

by Carlene Allred

On Friday Sept. 29, Bob Richards and I arrived and the next day Pat Kambesis flew in. It was a special occasion for me because the four children were staying with their grandparents, so I was free from the constant responsibility. However, after about a week I did begin to miss the children terribly.

The survey up the meandering bottom level passage went quickly, and upper level stuff was not far behind with such a crew of competent helpers. There were some difficulties, though. On one trip involving Pat and I, the compass was malfunctioning, and it was not until later during the data reduction that we realized how badly. Because of the various tie-ins we were fortunately able to salvage that survey.

One day while mapping in an upper level with Andy Porter, Alan Cressler found himself wallowing in someone's septic tank. Land owners in the subdivisions above the cave love to use the lava tubes for this purpose because they "perk" so well. We now know of three septic sites within Kazumura Cave.

There are various other greywater (non-sewage wash-water) drip sites scattered throughout. The cave also is used for garbage disposal at some en-

trances, and there is one particular dumpsite that is vast.

Using the two aluminum extension ladders for reaching high places was a new vertical technique for some cavers. Readers may scoff, but there is no other practical way to get into those upper levels with their shiny, smooth overhanging approaches. Ladders were sometimes extended beyond their capacities, at times with guy lines to stabilize them. On one survey Doug Strait did a shaky heroic "first ascent" and anchored a rope so Carol Vesely and I could get up safely.

The bottom level was large in diameter, sinuous, and often canyon-like, with smooth metallic looking walls gently grooved with horizontal flow ridges. Floors were of clean black pahoehoe lava with the texture of piled ropes, and were sometimes covered over by breakdowns. The nearly horizontal lava river was broken at times by spectacular lava falls up to 50 feet high. At the base

Continued on page 2

PRESIDENT'S CORNER

by Marcel LaPerriere

After writing this section for a couple of years my imagination is running dry. As I sit in front of the computer I can't think of much to say, so this will be short.

A couple of months ago I started producing a weekly radio program on caves, karst,

Continued on page 10

Kazumura continued from page 1

of each fall was a magnificent plunge pool where the passage had been widened. Particularly spectacular was Skylight Falls where a small jungle-draped entrance high above the plunge pool illuminates the falls and drained pool with natural light.

Upper level passages were variable. Top level horizontal maze passages were wide and often very low, and were usually decorated with long metallic-looking drip straws. Stacked passages were sometimes five deep, and were often adorned with variously colored and textured overflow coatings and sometimes studded with large lava balls - rafted rocks "glued" by smooth lava coatings onto walls, ceilings and floors. Some ceilings and walls were garnished with expanses of satin textured "cow udders".

When the Olaa survey was complete to the road fill blockage, we all celebrated with a through trip. An entire day was taken off to rest up and plan for it. A camp and cache was set up near the Sheldon entrance, which is about 15.5 miles downtube from the uppermost (Progress of Man) entrance. Excitement ran high as the eight of us (not including Mike who accompanied us for about 4 miles) began the nation's first 1,000-meter-deep through trip, which was 26 miles long. The drops were pulldowns rigged by Andy and Alan. There were about 17 of these.

It was amazing that Alan, supposedly the cripple of the group, was always racing ahead. Doug's wonderful mega-light illuminated the cave brightly for those walking near him.

The four-mile-long Olaa portion went by quickly. However, the black lava intrusion at the dig site was low and miserable to pass through and I wore out my pants and shoes there.

This dig is truly commendable. Sexton's Cave also went by fairly easily. Our rope riggers had invented a special kind of knot at the top of each

fall that was distinctly suited to Kazumura pulldowns. It became known as the Kazumura knot.

In the Upper Kazumura portion, which is 5.3 miles long, some in our group began to tire. We ran low on water, as the warm temperature and fast pace caused us to sweat profusely. Bob began to become especially dehydrated. Kevin, Bob and I brought up the rear and were nearly staggering in exhaustion when we entered the low portion just before the next dig site. We doggedly continued onward through the long crawl on our bellies, sweat dripping. To our delightful surprise we suddenly came upon a special gift sitting in the middle of the passage. It was a plastic bottle filled with water! The gift had been left for us by Doug, who had used his water purifier to collect some cave water for us. Bob guzzled down most of it, and with a spurt of new energy, oozed his way up through the tight body-contorting connection into the next portion of the Cave. Kevin and I were amazed that he, being a large man, was able to fit through at all! We had horrifying visions of Winnie the Pooh, stuck until he could shrink.

It was about another mile to the camp, where we found everyone in bed. Dinner consisted of a package of freeze dried stuff for each of us, and mine really hit the spot. Carol, who had been away from her nursing baby all day, was met by Grandma Mary and eager Brian at Sheldon's entrance. She spent the night with the baby at Arnott's Lodge.

The next morning after Carol returned, we commenced our trek with about 10.5 miles remaining. Old Kazumura had over five miles left. Much of the route was over breakdown and it went fairly slowly at times. Kevin became discouraged at the slow pace, sure that Bob would miss his plane flight the next morning. Tireless Pat, Carol, Doug, Alan and Andy had long since left slow

Bob, Kevin and me far behind. We didn't see them again until the three of us emerged up through the plastic culvert, which stabilizes the breakdown dig site connecting Old Kazumura with Lower Kazumura. After reburying the top end, we continued onward. Carol and Pat began to tire, and dropped back into the slower group. For the last several miles we were in a daze. It felt like we had been walking forever underground, like Journey to the Center of the Earth. Pat had blisters, and my back was sore where my pack rubbed against sunburn. Carol was near to bursting in a motherly way and Bob would sigh audibly whenever another mountain of breakdown came into view. Everyone's shoes were worn out.

Near the Pahoa Highway there is a side passage that leads to an entrance. Carol and Pat waited there while Kevin, Bob and I walked out and over to the nearby WikiWiki convenience store. We brought back candy, Gatorade and Japanese food to those waiting.

With renewed energy our group walked the last several miles to the lowest entrance, where we met the tireless trio who had raced ahead. They had toured the lowest mile of cave beyond the entrance and witnessed the "lava sump", which is the end of the cave. Kevin took Carol and Pat down there while the rest of us waited for our planned pickup time by Mary. We had to quietly sneak out to reach the road because of a hostile lady living in the adjacent house. She would probably call the police if she saw us. It was pouring rain as we reached the road. The trek took approximately 35 hours including sleep time.

After Bob, Carol, Brian, Mary and Pat left, we mapped all the high leads that had been missed. Now, Kazumura Cave proper was finished.

Part I - Alaskan Caver 15(5) Oct. 1995

CHILDREN BECOME SPELUNKERS



POWIE '95 Kids in Cavern Lake Cave. Back row (L to R) Ella Allred, Kina Smith, Jed Smith, Soren Allred. Front row: Amy Heaton, Christie Heaton, Forrest Allred Flint Allred, Holly Heaton. Photo: C. Allred

Do you take your children caving?

by Carlene Allred

From time to time people have asked this question.

When the children were very tiny and easy to carry around we would sometimes take them underground. They would cry much of the time, perhaps afraid of the dark, or echoes or of our headlamps, which must have been strange to them. We probably appeared as strangers too, in our caving garb.

We learned that caving with small children is no fun at all. They learn to like it, though, when they reach the ages of 8 or 9-years. Then they are mature enough, both physically and emotionally to handle moving about in caves. Kids especially love tight crawlways.

We have some cliffs around our oceanfront home, and they have always been a worry to us, as they attract kids like magnets. Our children have never been allowed to play on these cliffs, but we have many times caught them secretly playing "rock climber". On one occasion the rope anchor was merely a plastic rope tied onto a rock the size of a football, and set on a ledge.

Where had they learned about rockclimbing? How did they find out that their daddy was a rockclimber? Telltale photo albums and climbing catalogues. Caving periodicals and talk of deep pits. Also, we had let them play with vertical gear as toys ever since they were born.

So, we decided the only way to keep our children safe was to educate them and include them in our caving activities. A rappelling and ascending course was set up on the cliffs.

Our children learn fast and do quite well on rope, all except for little Forrest, who is only five years old and firmly does not want to "risk his neck" in any scary way. He will rappel down a 45-degree slope, though. Eleven-year-old Soren is the most experienced and can handle an eight-hour survey trip with vertical pitches. However, he seems to be most interested in "deep pits", and this worries me. What is a caving mother to do?

Upper Kazumura

by Soren Allred, age 11

My Dad and I were the first ones to go down the Monkey Hole. My Dad had recently found it but had not gone into it. We were going to explore it. We climbed into a small four-foot hole and my Dad helped me put on my vertical gear. Down by my feet was a small hole that went about 15 feet down overhanging. We landed on a ledge. At the bottom of the hole was a skeleton.

The passage was very big. We went one way and soon it got small. It got so small that we couldn't fit in anymore. Dad said that next time they would chisel it bigger to see if it was attached to Kazumura. He went with Mike Meyer and they dug through to make it connect.

Beaver Falls Cave

by Flint Allred, age 9

This story is about Beaver Falls Cave. When we got there I climbed up on a log and fell on my head. I had my helmet on and I fell about six feet. I went in and it was fine. We went into another cave (another part of Beaver Falls) and went to the end. We saw a pit. I got to go in a muddy crawl (Snow White Passage) and I went into a place where it got steep, wide and tall. We couldn't go on. My favorite place was the muddy crawl part.

Starlight Cave and Kushtaka Cave

by Amy Heaton, age 11

When I was in Alaska I went to as many caves as I could. I went to Starlight Cave. My dad, Tim Heaton, was looking for bones, and Ella Allred and I went through the short side of the cave. I rappelled down a 120-foot overhang. I learned how to switch from a rappel rack to ascenders and back to a rappel rack while on the rope. When I was done, I ascended back up the overhang cliff.

I went on a boat to Kushtaka Cave. There was a nest inside. It looked like a bird's nest but twenty times their size! We saw pieces of black rock called chert. I went through a passage that was really tiny. Jennifer Bird and I sat outside and carved forks and other silverware, but none of them looked like they were supposed to. Carlene Allred had to come out because it was small and muddy inside. Then she carved a perfect fork. When Dad came out with David Love, they looked like big mud monsters. Someone took a picture. It was fun.

Starlight Cave

by Ella Allred, age 12

When I went to Starlight Cave last summer, I had a great time there. I got to go rappelling and ascending.

When I first got there with my friend, Amy Heaton, we had to rappell down into the cave the easy way which we could have walked down if we had wanted to, but Tim Heaton who was with us wanted us to be safe because it was really steep and a long way down.

We didn't get to go the hard way because there was too much thick brush and trees and we were afraid of falling into unknown holes because they were all over. My brother, Soren, (who was only 11-years-old and I was 12) got to go the hard way.

He got to go down and up the 100-foot drop and then went into the long side of the cave. I only got to go into the short side of the cave, but I was glad of it. I get really tired of caving for a few days sometimes, and don't want to be part of very many cave explorations, but I still have a lot of fun in caves anyway.

Well, anyway, in Starlight Cave, after we came out of the dark part of the cave, Amy and I ate our lunches of candy and gorp, then Amy and I got to go on the 100-foot drop, too, but that was from the bottom to the top and then from the top to the bottom instead of from the top to the bottom and then from the bottom to the top. Amy and I did it just for fun. Amy also tried switching from ascending to rappelling and then we went home.

Devil's Canopy Cave

by Christy Heaton, age 12

I went with David Love, Jenny Bird, Carlene Allred and my dad to Devil's Canopy Cave. First we had to find it. It was very hot that day, and we were wearing about three layers of clothes! It felt very good when we got in the hole where the cave would begin. It wasn't that hard to crawl around in that cave. When we finally got there (the site), I found a little room for myself to put my stuff (food, clothes). It got kind of confusing in there. I felt like my room had moved from one side of the room to the other. I helped my dad dig in the cave for bones. I also helped Jenny clean them. When we left the cave, I pulled myself up with a rope. The end.

Prince of Wales Island

by Holly Heaton, age 10

Hi! I went caving on Prince of Wales Island last summer. I had the most fun when I was on the ferry. I saw some humpback whales, but it was hard to see them because it was foggy and slightly raining. When it wasn't raining you could go on the deck and watch the water go by. When I got to Prince of Wales Island there were a lot of berries, and I had fun picking and eating them. I learned how to spin yarn from a lady that lives there.

I went into only one cave, and it was called El Capitan. To get all the way through the cave you had to squeeze through a crawlway. There was a hill that you couldn't go up unless you had a rope or a ladder. Someone had brought a ladder and it was fun climbing up and down it. After we crawled and climbed we saw some mud formations that were really neat.

Book Review

Caves

by Stephan Kramer.....Photographs by Kenrick L. Day
Published by Carolrhoda Books, Inc./Minneapolis
© 1995

Caves, one of the Nature in Action books for children, uses pictures and words to take readers on an in-

HOW TO MAKE CAVES COME ALIVE

For children who have never been to a cave or may never get to go

by Kathryn Myers

printed in *THE EXPLORER*, September 1994

There is nothing like the real thing, especially where caves are concerned. This is one of the main points I try to make in teaching students in the Los Angeles Unified School District about caves. In the beginning of my slide show I show them pictures of the man-made cave at the Arizona-Sonora Desert Museum. I tell them to pay close attention to the colors and lack of detail on the speleothems in a man-made cave compared to the detail in naturally formed caves. No matter how hard we try, we will never be able to duplicate the beautiful work of nature. ...I also know that even though they have seen the slide show or a movie about caves it is very difficult to visualize what caves are really like without visiting them.

I remember showing some View Master slides of Carlsbad Caverns to a first grade student in a school in East Los Angeles. Most of these students have not heard of caves, let alone gone to one. This girl was no exception. As she was looking through the slides she said,

"This one looks like it's going to kill somebody."

When I asked her if she wanted to see the rest of the slides, she said,

"No! That's OK, you've scared me enough already." For this girl, caves looked more like the special effects in a horror film than anything made of rock.

To illustrate how stalactites and stalagmites form I have found a couple of crystal experiments that seem to give children a better feel for how cave formations develop. Of course, I mention that it takes thousands of years for formations to form in caves, but these crystals do illustrate the process in which each drop of water

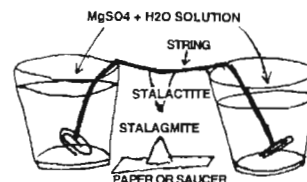
brings down a little bit of rock (of crystal) with it to form the stalactite and stalagmite. I found the first magnesium sulfate crystal experiment in a book called *Chemically Active*.

WHAT YOU NEED

- 2 heat resistant cups or glass jars (baby food jars work well)
- a piece of string or yarn about a foot long
- 2 paper clips
- magnesium sulfate. It can be obtained in a very pure form from a chemical supply house (about \$5-10 per pound) or you can use Epsom salt from a pharmacy (\$0.75 per pound). Epsom salts are cheaper, but seem diluted with water.
- 2 cups boiling water (if you are doing this experiment with a group where a kitchen is not available, I have found that a plug-in coffee maker heats the water sufficiently)
- a piece of paper or a plate

DIRECTIONS

Boil the water. When doing this experiment with a class of children, I let them set up the cups about six-inches apart with a piece of paper in-between the cups. They will fill the cups about 3/4 full of Epsom salt and tie a paper clip onto each end of the string. I pour the hot water into the cups almost to the rim and then they stir the mixture until the Epsom salt dissolves. Wet the entire string in the solution, then put one end of the string in one cup and the other end of the string into the other cup. The middle of the string should hang over the plate or paper. The crystal will form like a stalactite hanging from the middle of the string.



As yet, I have had no success with getting a stalagmite to form with the magnesium sulfate crystals. One problem that occurs regularly is that the string dries out very fast and the water is not absorbed to the middle of the string to make a bigger crystal. This may be solved by using thicker string or piece of yarn. NOTE: I had much better luck with this experiment in using the purer form of magnesium sulfate. When using the purer form, the guarantee of this experiment working is much greater and you can use much less magnesium sulfate per volume of water. A little over half the $MgSO_4$ is sufficient. However, when using Epsom salt, I want to stress that it is extremely important to saturate the water with as much Epsom salt as you can possibly dissolve into the water.

Another variant on this recipe is mentioned in *Caves* by Jenny Wood, 1990 Two-Can Publishing, Ltd. The process is the same as above, but substitute washing soda (sodium carbonate) for Epsom salt. The water must be saturated with the sodium carbonate as it is with the Epsom salt. This experiment suggests putting a saucer between the two jars full of solution and putting a crystal of washing soda in the saucer to form the stalagmite. The Epsom salt experiment takes a couple of hours to see the results. The results of the washing soda experiment take several days. The book claims that over time it will form a column between the string and the saucer.

This experiment is rewarding and the children absolutely love it! I've had whole classes begging me to let them stay in during their lunch so that they can watch the crystals grow.

NEWSBRIEFS

The CIG Newsletter 39(12) Dec. 1995, p 147. Kazumura Cave, a lava tube on the Big Island of Hawaii was connected to Olaa Cave on September 22 by Kevin Allred and Mike Shambaugh. The connection makes the Kazumura Cave system over 1,100 meters deep and over 60 kilometers long. This makes Kazumura Cave the deepest cave and the longest lava tube in the world.

oooooooooooooooooooo

The Hollow Earth News 3(1) January 1996, p 2. Neversink has not been reopened yet, but it is just a matter of time before it is (in the meantime, please don't go there until the deal has been completed). The SCC is asking people to make a donation to help pay off the money still owed on a loan taken out towards the purchase of this famous Alabama pit and the access to it. The December issue of the Huntsville Grotto Newsletter notes that you can buy a 40 foot by 40 foot plot of land somewhere on this property for \$40. You will receive an "honorary" landowner certificate, a survey sheet with your plot number and a T-shirt which reads "I own a piece of the pit at Neversink." Over 700 "honorary" plots will be available for purchase.

oooooooooooooooooooo

The Speleograph 31(12) December 1995, p 165. The November 19th Lake Cave cleanup crew reported that when they entered Lake Cave the cave was the cleanest it has been in years. Jim and Libby Nieland and Kim Luper were pleasantly surprised to find that there was only a small (less than 1/3 of a waste basket size bag full) amount of trash, and the only graffiti was near the lake and consisted of some pumice-like writing on the walls. There were only three aluminum cans found on the trip. The graffiti and trash was removed in record time and the cave looks really great! As the crew exited the cave they met up with Don Krehbiel who had just arrived for the cleanup. Hopefully, the cave will continue to be exceptionally clean in the future. As a current saying goes, "It could happen."

oooooooooooooooooooo

Cleve-O-Grotto News 40(6) December 1994, p 55. "Speleothems Sold at Traveling Gem Shows." According to the article, E.T. Meteorites is engaged in the public sale of speleothems. These may belong to the people of China, but this type of promotion could stimulate the stripping of speleothems from caves in the United States. The author recommends letters to E.T. Meteorites' owner

Edwin Thompson, 5150 SW Dawn Street, Lake Oswego, OR 97035 and to Allen Van, the promoter for Gem Faire Inc., at PO Box 8329, Ranch Santa Fe, CA 92067-8329 advising them of your distress and outrage over seeing speleothems offered for sale.

The above information is credited to Frank Vlcek who found it on Cleveland Freenet. His telephone number is 216/257-7257.

oooooooooooooooooooo

BCRA's Caves Caving Issue 68, Summer '95, p. 10. Killuragh Cave. Adrian Thomas, from the University of Limerick Caving Group, describes some of the recent developments at Killuragh Cave near Cappamore. Of special interest are six microliths, which are small pieces of flint thought to be used as part of a fishing harpoon. Found at the cave, these artifacts probably date from the Mesolithic era which dates them at about 7000 BC.

oooooooooooooooooooo

American Caves 7(2) Summer/Fall 1994, p 10-14. Protecting the Ancient History of Crumps Cave. This cave, discovered by European settlers sometime around the turn of the 19th century, was heavily vandalized until gated. The renewed interest in protecting the cave came when the prehistoric mud glyphs were noted. According to the article, Archaeologists Dan Davis and Valerie Haskins believe the glyphs were probably created during the Mississippian period about 900 years ago. In order to protect the cave, the second largest bat cave gate in the world was constructed for the Crumps Cave.

oooooooooooooooooooo

Nittany Grotto News 42(4) December 1995, p 53. Of the caves in Clinton County, Bull Run offers some challenges. No cave has ever existed here that we know of, yet it is listed as a cave in the PA Cave Database, says Keith Christenson. "I guarantee there is a cave here, and we have landowner permission to dig, but no one has yet been able to find it. As a tease, in the summer there is a section of the sinkhole where moving any rocks along a 100 foot stretch will yield blowing air. Also, a visible melt spot has been observed in the winter."

p 60-64. During Spider Sink Cleanup in October, 60-70 helpers remove trash. Over five tons was hauled away to an approved sanitary landfill, about eight tons was moved out of the sinkhole in preparation for hauling to the landfill, and probably another five tons remains in the sinkhole.

ENIGMA

Dall Island, Alaska • Preliminary Report #198, Addendum to #159 Tongass Cave Project • National Speological Society

by Steve Lewis
October 27, 1994

DESCRIPTION

Work on Enigma in 1994 netted 180.5 Meters (592.0 feet) of new passage and 69.4 meters (227.6 feet) of surface survey. Total length of the cave is now 379.0 meters (1243.1 feet) with surveyed depth at 38.3 meters (125.6 feet). Visible but unexplored passage rises at least 8.0 meters (26.2 feet) above this point. Most of the new passage is decorated to some extent, and ranges from containing popcorn and small stalagmites and stalactites to being completely covered (including the floor) with moonmilk.

Snow White's Pleasure Passage up to Smokey Bear is generally phreatic in nature, usually about 1 to 1.5 meters in diameter. There are few spectacular speleothems, but passage is consistently decorated with popcorn and small stalactites and stalagmites. Great care must be taken to avoid damaging formations while negotiating this section.

Squeezy's Passage is a vadose passage that crosses Snow White's Pleasure. It goes tight and remains unpushed.

Dopey's Passage is phreatic and, if our surveys are accurate, chokes less than 0.5 meters directly beneath breakdown on the floor of slightly Enigmatic.

Smokey Bear Passage is a joint controlled phreatic passage that cuts into the floor of the Snow White Passage.

A small stream enters from a very tight joint (it might go for a small person with minimal clothing) and drops down to exit via a too-tight streamway. Just above this too-tight exit, Kris Esterson discovered the remains of a bear. Portions of the skeleton were removed by Forest Service Archaeologist Terry Fifield for dating and other initial analyses.

Snow White's Passage changes dramatically after crossing the Smokey Bear Pit. From Smokey Bear's Passage until its end at the Enigma Variations, the passage appears to be of vadose origin along a fault, with a distinct vadose channel in the floor. Walls are covered with moonmilk and popcorn. It is virtually impossible to pass through here without doing some damage since the passage is quite narrow.

Beyond this vadose section is a low chamber with very dark rock. A wet dig by Rob Knotts brought us into

blowing passage, the Enigma Variations. A phreatic section was followed to the north. This section was heavily decorated with moonmilk, especially in the last few meters where it covered the entire passage.

There are numerous unexplored leads along this passage. A stream crosses just at the end of the survey. It is likely that this is the same stream that drops into the Smokey Bear Passage. Passage continues unexplored to the north.

Passage also leads from the initial dig to the southeast. This is a rapidly ascending passage that has large volumes of very cold air. Three climbing leads will require protection and a dynamic rope. Passage ascends at least 8-20 meters (26-65 feet) up and continues big. Another passage drops down to streamway with the sound of running water. It appears to need a handline at least. A cold wind blows out of this passage. Extra clothing will be a necessity for cavers when mapping in these areas.

BIOLOGICAL

Several deposits of feces (probably bat guano) were located in the Baidarka or Bailaita and Snow White's Pleasure passages.

PALEONTOLOGICAL

Dopey's Passage contains a substantial deposit of fish bones and may also contain small mammal remains near its present terminus. These should be examined further and protected from damage before any effort is made to dig a direct connection between Enigma and Slightly Enigmatic.

Fish bones were noted and collected for Terry Fifield in Snow White's Pleasure Passage just before crossing the Smokey Bear Passage.

Smokey Bear Passage contains bear remains. I believe that Terry Fifield has contacted paleontologist Dr. Timothy Heaton about this find. Dating of already removed portions of the bear should be undertaken, and further study and excavation appears to be warranted.

Large amounts of fish bone were noted at station DBAG81, in the Enigma Variations section.

MANAGEMENT RECOMMENDATIONS

As noted last year, these caves are not easily located from the water. However, their location should be kept strictly confidential due to the extreme fragility and beauty of the formations, and now, due to the importance of still unstudied paleontological finds.

This cave should never be open to the general public. Removal of bones for study will thus not be quite as problematic as it might be if groups were being given tours. However, the option of returning bones to their original location might be considered once studies are completed.

Exploration and survey should continue and the hillside above and below the cave should be searched thoroughly for other entrances to the system. This is especially critical now that the Enigma Variations has opened up. Before any efforts are made to continue pushing these leads, a determined effort should be made to locate an upper entrance. This is essential if further degradation of moonmilk in the upper parts of Snow White's Pleasure Passage is to be avoided.

This cave with its diversity of passage types and speleothems, its paleontological sites, and its abundance of going leads, deserves significant future efforts at careful and detailed study and survey.

BROKEN BUS CAVE

Prince of Wales Island, AK • Preliminary
Report #179, Addendum to Report #127
Tongass Cave Project • National Speleological
Society

by Kevin Allred
November 16, 1994

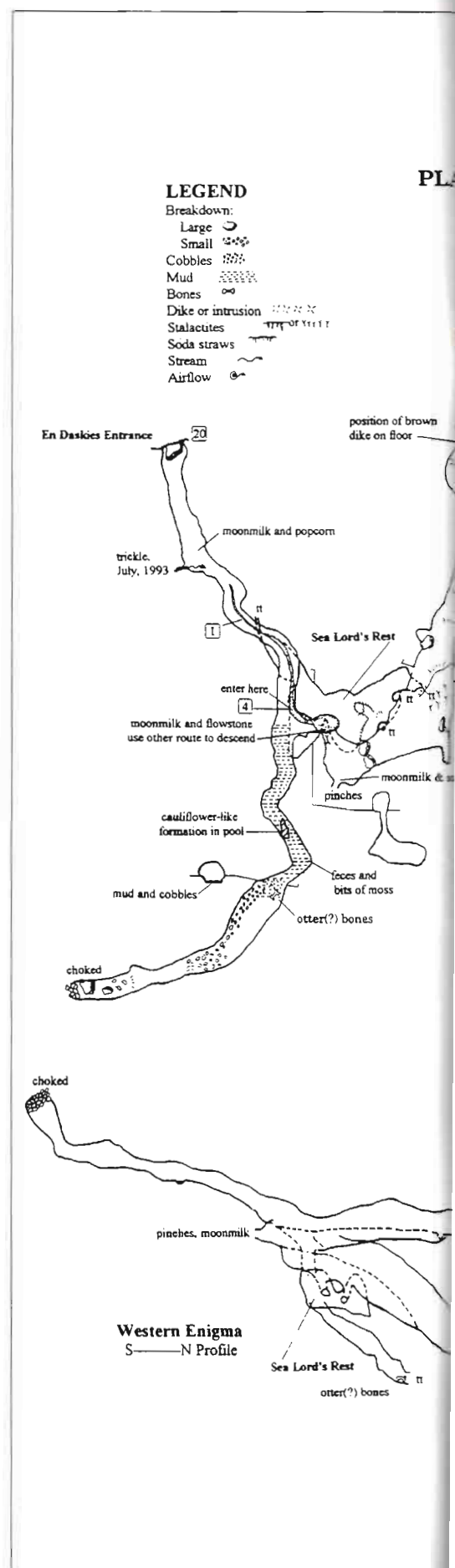
NEW DEVELOPMENTS

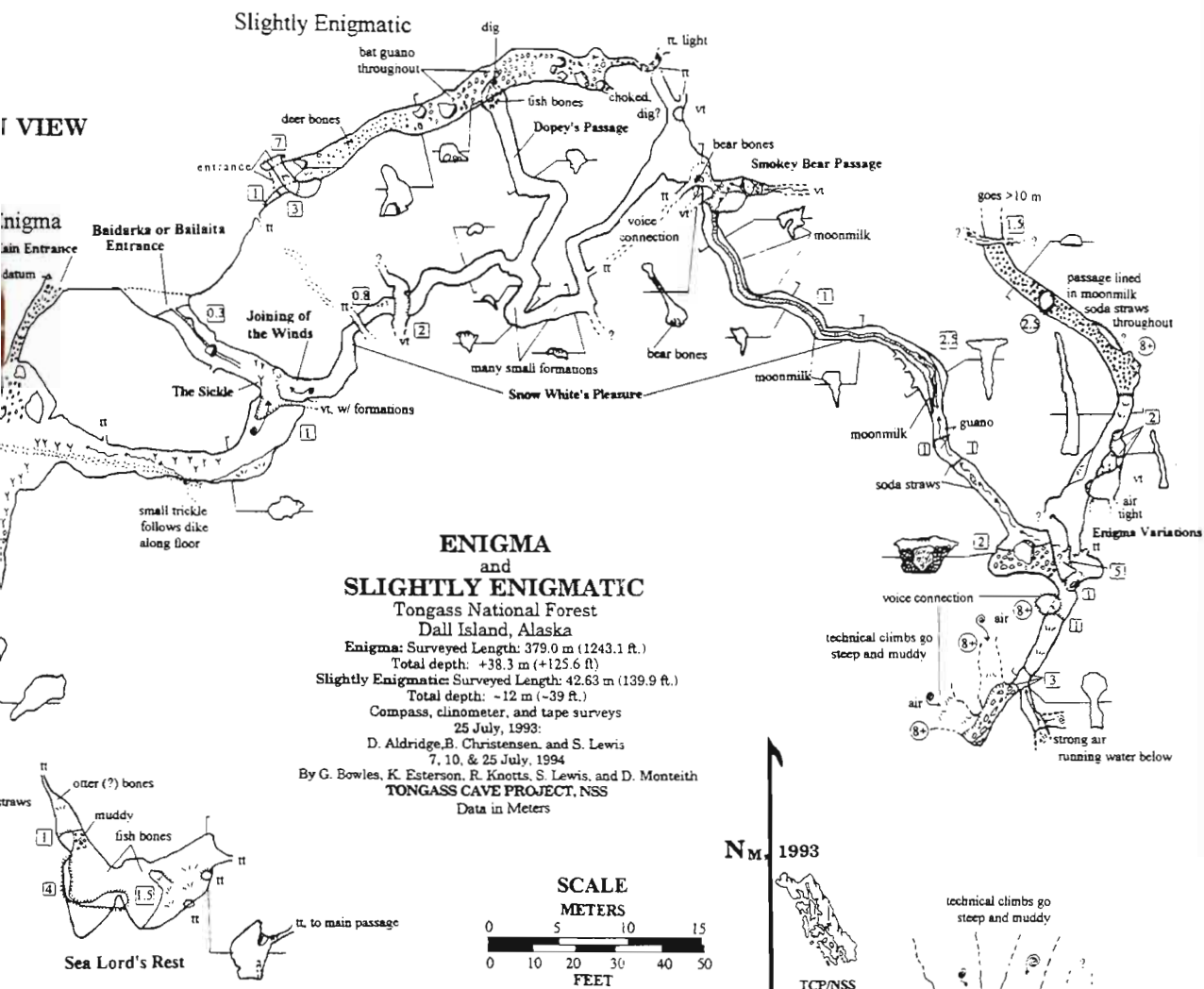
On July 10, 1994, Davied Klinger and Rob Knotts checked a cave reported by Mike McFadin. The cave turned out to be Broken Bus Cave, but apparently without the broken bus nearby.

There were other changes since last fall. First, a pool of water appeared in the bottom of the cave which had previously ended in silt fill. Second, there are now many, many broken beer bottles in the cave, presumably from the people (possible tree thinning) camped during July in the quarry.

MANAGEMENT RECOMMENDATIONS

The recommendations remain the same, however, it may be a good idea to get the responsible litter bugs to clean up the mess.





ILLUSION PIT

Prince of Wales Island, Alaska • Preliminary Report #192, Addendum to Report #95 Tongass Cave Project • National Speleological Society •

by Kevin Allred

November 15, 1994

DESCRIPTION

Illusion Pit was explored and surveyed further on July 7, 27 and 30th. This work was concentrated in one of several unexplored pits at the bottom of the entrance drop. Two or more additional pit-leads remain in this same area. The new survey dropped 30 feet to a too tight, muddy, tube called Epoxy Passage having good air flow. In a subsequent trip, a dig took the explorers into horizontal passage containing speleothems. The way was finally choked in an unexplored jumble of conglomerate breakdown originating from above. Wood debris is present in the area. A stream comes down this breakdown slope and is swallowed in a silty alcove. At least

three unexplored leads take off from the newly discovered horizontal passage, so apparently much work remains in Illusion Pit.

Total surveyed length is now 830.3 feet and the depth is 203.2 feet.

BIOLOGY

In new horizontal section were found dead beetles. In the same region a bat skeleton and bat guano were found.

MANAGEMENT RECOMMENDATIONS

Illusion Pit recommendations remain the same as in #95. (Alaskan Caver 13 (4) October 1993, p.12)

Corner Continued from page 1

and caving, for the local public radio station, KRBD. If any of you reading this have ideas for this program I would love to hear about them.

This program runs 3-10 minutes and is played twice on Thursday mornings during the news.

Even better if any of you would like to submit a cassette tape for this program, I will edit it and make sure it is aired. After it airs I will return the tape. Any help with this program would be greatly appreciated.

One more thing about the radio program. From what I am hearing on the street the public is very interested. I have heard all sorts of comments on how people are enjoying the program and how much they are learning.

An important part of protecting the caves of Alaska is educating the public. I believe this program is a good way to do that. Please consider submitting a tape for "Underground Passages".

Thank you.

TONGASS CAVES AT RISK

by Marcel LaPerriere

Caves and Karst in Southeast Alaska are in jeopardy because of a bill introduced in the Senate by Senator Frank Murkowski of Alaska. Bill S.1054 would replace the mandated timber cut level from the Tongass Timber Reform Act with a mandated jobs level. This bill would mandate a certain amount of jobs regardless of how it would affect the environment. There are no safeguards in this bill to counteract how industries automate and process more timber, only a mandated job level.

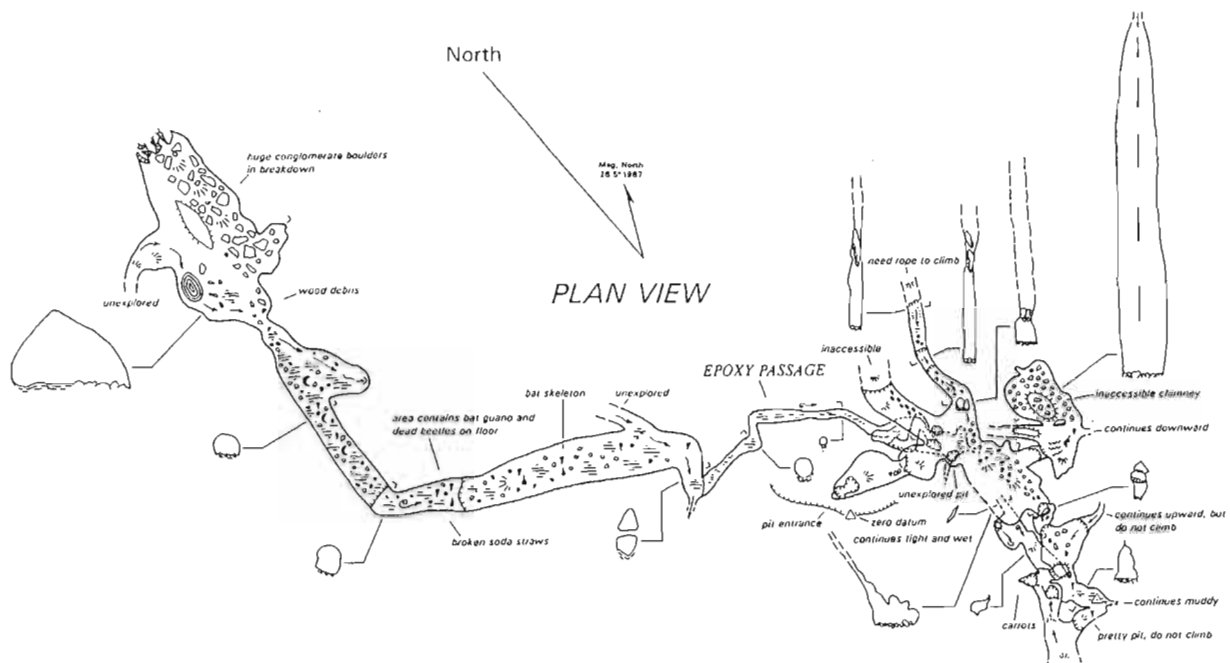
The Forest Service recently started a Karst Vulnerability system to protect caves, karst features and drainages. We believe that if this bill passes we will return to buffer zone protection that has not been effective in preserving cave systems.

Please write your Congress members and send a copy of the letter to Alaskan Senators Frank Murkowski and Ted Stevens. Let them know that the Forest Service is addressing the issues within the Tongass Timber Reform Act, and ask Congress to encourage the Forest Service to continue Karst Vulnerability mapping. The Alaska delegation wants Congress to think that this is only an Alaskan issue—yet the Tongass National Forest belongs to all Americans, and cave resources within the Tongass are especially precious to all cavers.

If you are interested in a brief history of karst in southeastern Alaska please refer to the February 1995 issue of the NSS News. If you would like more information you can contact Connie or Marcel LaPerriere at (907)225-4094.

Senator Frank Murkowski
U.S. Senate
Washington D.C. 20510

Senator Ted Stevens
U.S. Senate
Washington D.C. 20510



depth in feet

0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200

ILLUSION PIT

PRINCE OF WALES ISLAND, ALASKA

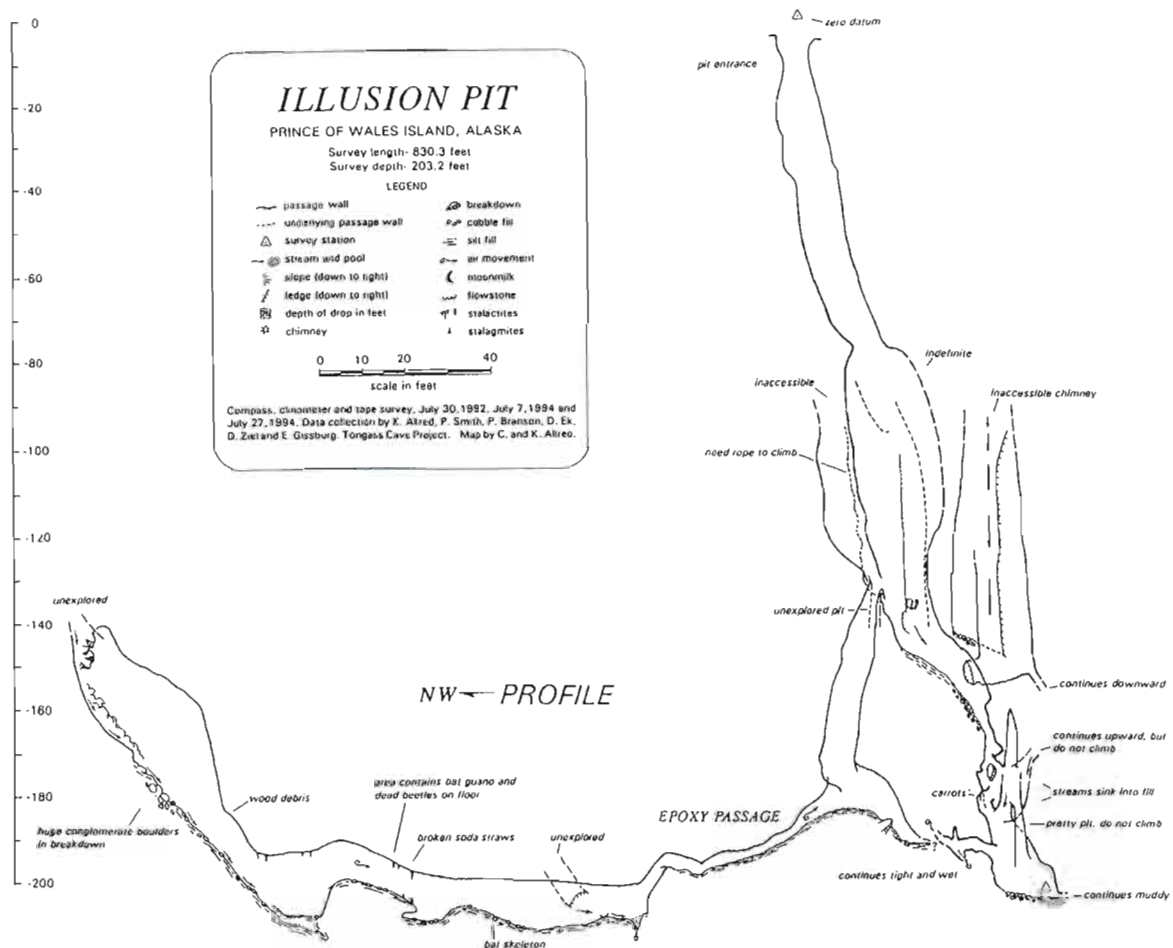
Survey length: 830.3 feet
Survey depth: 203.2 feet

LEGEND

- | | |
|-------------------------------|----------------|
| — passage wall | — breakdown |
| - - - underlying passage wall | — cobble fill |
| △ survey station | — silt fill |
| — stream and pool | — air movement |
| — slope (down to right) | — moss/mud |
| — ledge (down to right) | — flowstone |
| — depth of drop in feet | — stalactites |
| — chimney | — stalagmites |

0 10 20 40
scale in feet

Compass, clinometer and tape survey, July 30, 1992, July 7, 1994 and July 27, 1994. Data collection by K. Akred, P. Smith, P. Branson, D. Ek, D. Zierand E. Gustburg. Tongass Caves Project. Map by C. and K. Akred.



© 1994 by Callene Akred

SEE THE LIGHT CAVE MONKEY HOLE

Prince of Wales Island, AK • Preliminary Report #193
Tongass Cave Project • National Speleological Society

by Kevin Allred
November 15, 1994

SEE THE LIGHT

DESCRIPTION

See The Light Cave is located in heavily karsted subalpine terrain on El Capitan Peak. Inside the entrance after several small drops, a rope is definitely needed for the 35-foot drop which is decorated by speleothems. The final Light on Point Passage pinches in several places with a dry stream bed reported at the bottom. Total length is 203.8 feet and depth is 106.5 feet.

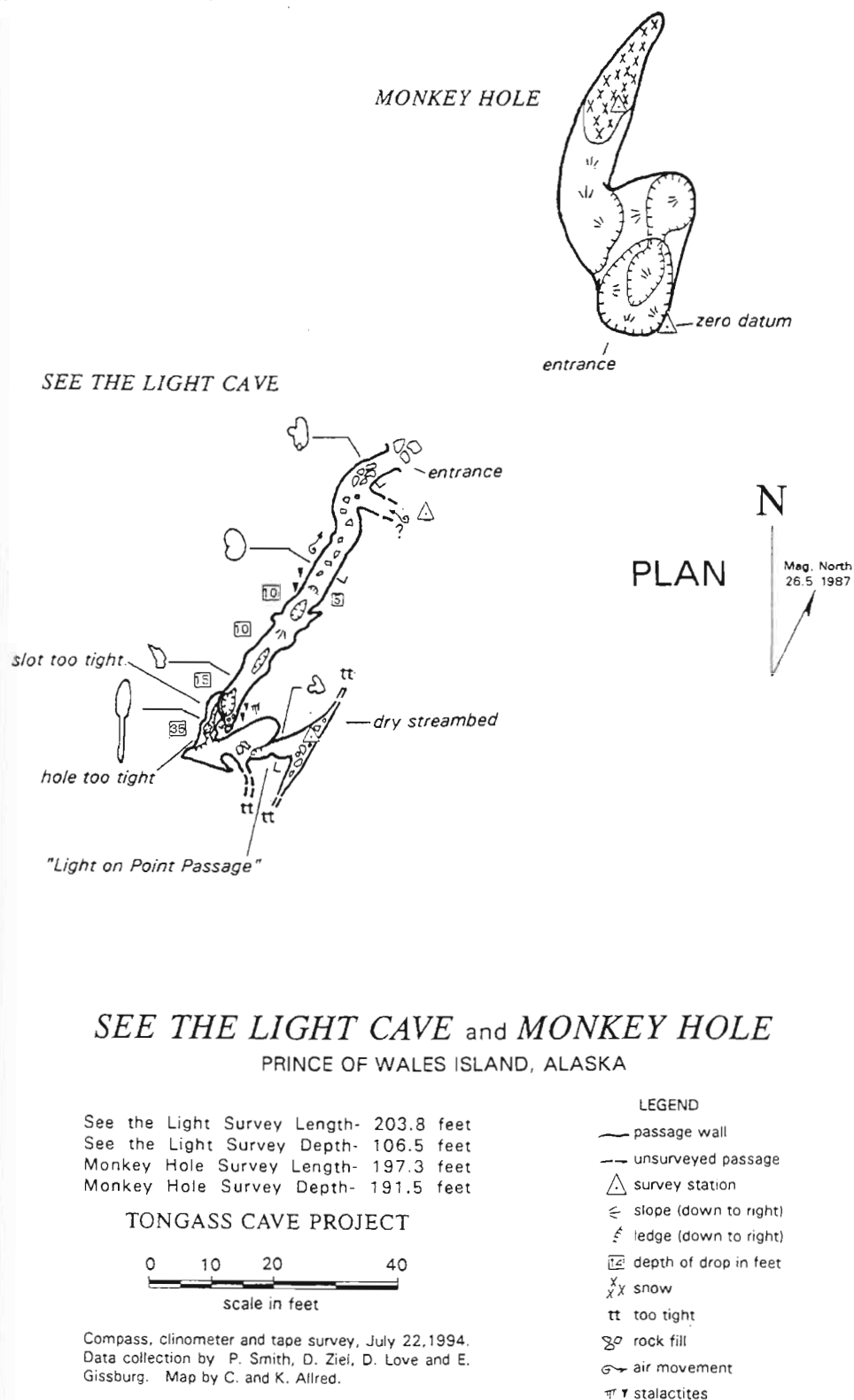
MONKEY HOLE

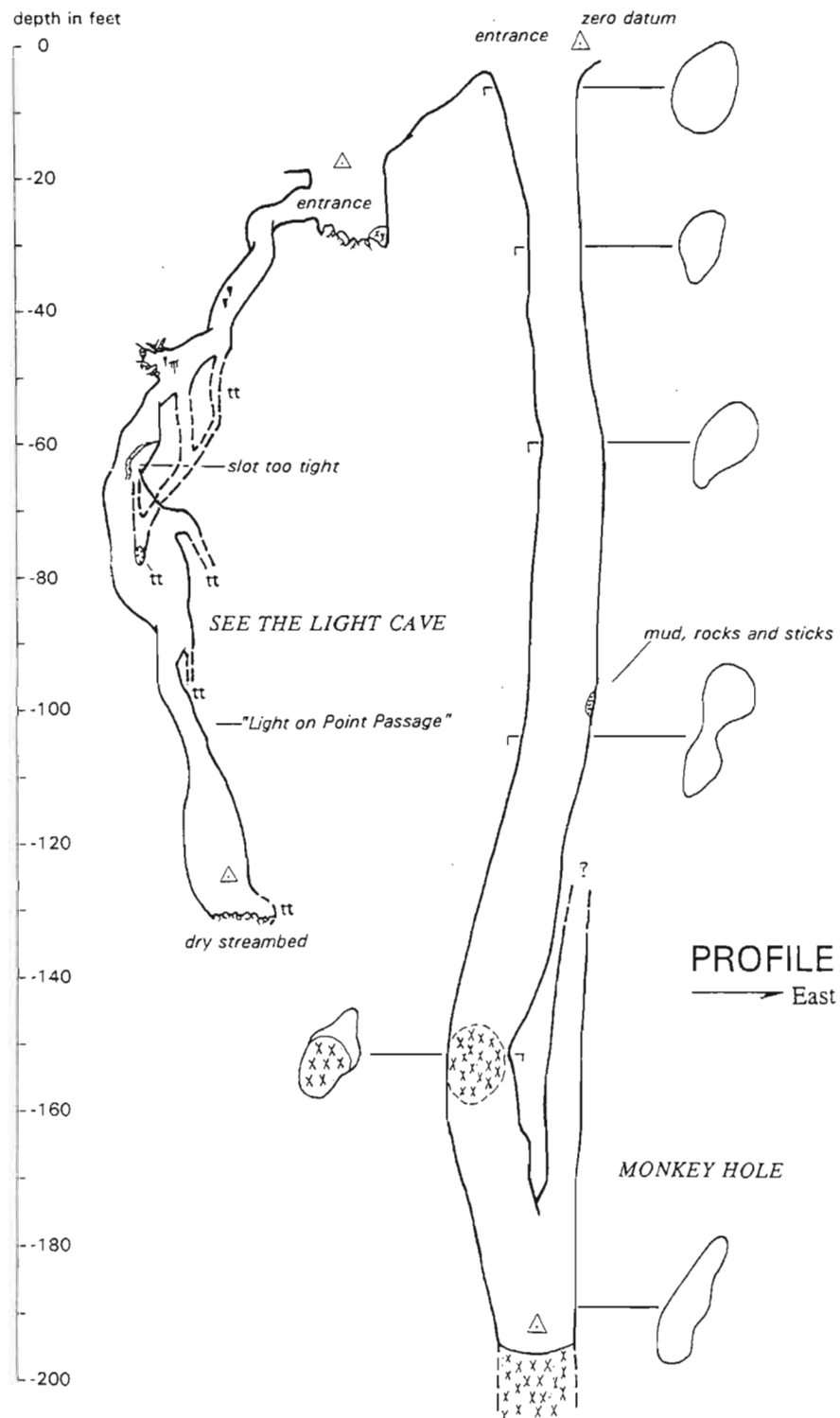
DESCRIPTION

Monkey Hole is located only 35 feet northeast from See the Light Cave. A 200-foot plus rope is needed for the entrance drop of Monkey Hole. Snow and ice were present on a ledge at -150 feet, and at the bottom where tight cracks extend further downward between ice and walls. Total surveyed length is 197.3 feet and depth is 191.5 feet.

MANAGEMENT RECOMMENDATIONS

Although it may not be likely that timber is marketable at this elevation, we recommend no logging or road building activities anywhere in this heavily karsted area. Location should only be shared with those who are vertically competent and able to cope with the cold temperatures of alpine caving.





THUNDERING SEA CAVE

Southeast Alaska • Preliminary Report #191 Tongass Cave Project • National Speleological Society

by Kevin Allred
November 15, 1994

DESCRIPTION

Formed in Silurian Marble, Thundering Sea Cave was discovered among several other caves by Connie LaPerriere, Marcel LaPerriere, and Kevin Allred while looking at entrances in the area. Speleogenesis was a combination of solution and littoral. Thundering Sea Cave has two entrances, one overlooking the most ideal nearby landing site available along this stretch of wave racked beach. The total surveyed passage is 101.8 feet with a depth of 6.9 feet. Many portions of the walls are covered with cave coral.

ARCHAEOLOGY

This cave is very significant archaeologically and this becomes very apparent in a 30-foot long side passage extending southerly from a probable fire pit site (see #7 on map). In this side passage are a number of charcoal pictographs, some of which have been at least partially obscured by speleothem growth, indicating great antiquity. The art depicts what appears to be: a raven (#9), five-foot wide face with beard (#10), a two-foot wide face (#11), two-foot high flower (#12), one-foot high drawing of a bird (#13), and obscured art (#14). A quick sketch of #10 and #9 was made during the cave survey (see Figure A). Under the drawing of the flower on a small ledge sits an empty sea urchin shell. Another urchin shell had been placed on the breakdown in front of the biggest face. Besides the #7 fire pit, is one other (#2) former fire pit and there are possibly some others.

The #2 fire pit has been disturbed by digging, and other possible signs of historical disturbance include a sharp edged (no cleats) boot or shoe scuff mark at the end of the pictograph chamber. Numerous bone and shell fragments are scattered throughout the cave; some possibly brought in by otters. Care was taken by the survey team not to disturb anything in the cave, and we removed nothing.

In some of the other caves nearby are more old fire pits and modern boot tracks. Jim Baichtal of the Forest Service had heard rumors of pictographs in a cave which sounded like it may be one in the same. He was not aware of its location.

MANAGEMENT RECOMMENDATIONS

Fisherman and recreationalists boating just off shore are probably occasionally attracted to the beach to investigate the spectacular cave entrances there. The pictographs in Thundering Sea Cave should soon be carefully photographed, studied, and documented by archaeologists and those familiar with ancient northwest native art. The cave floor is, in many places, covered in delicate shell and bone fragments, so there should be no further traffic except by those carefully photographing or studying this incredible cave. No really large pieces of charcoal were obvious on the surface for carbon dating, however, some branches had been brought into the cave at some earlier time, and these could certainly be dated. Location of this cave should be withheld from the public.

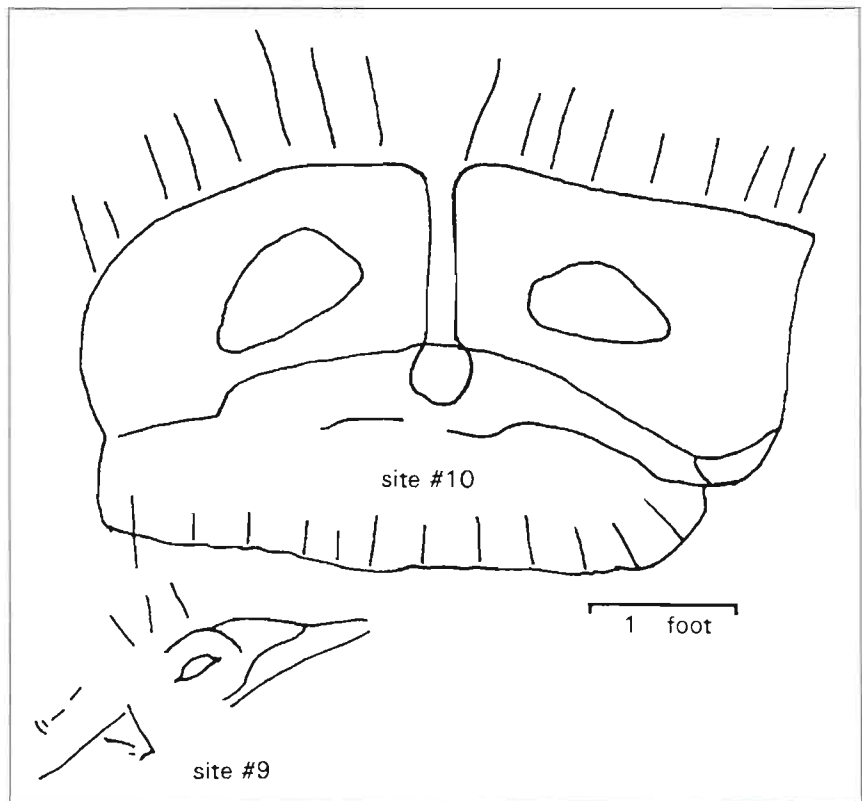
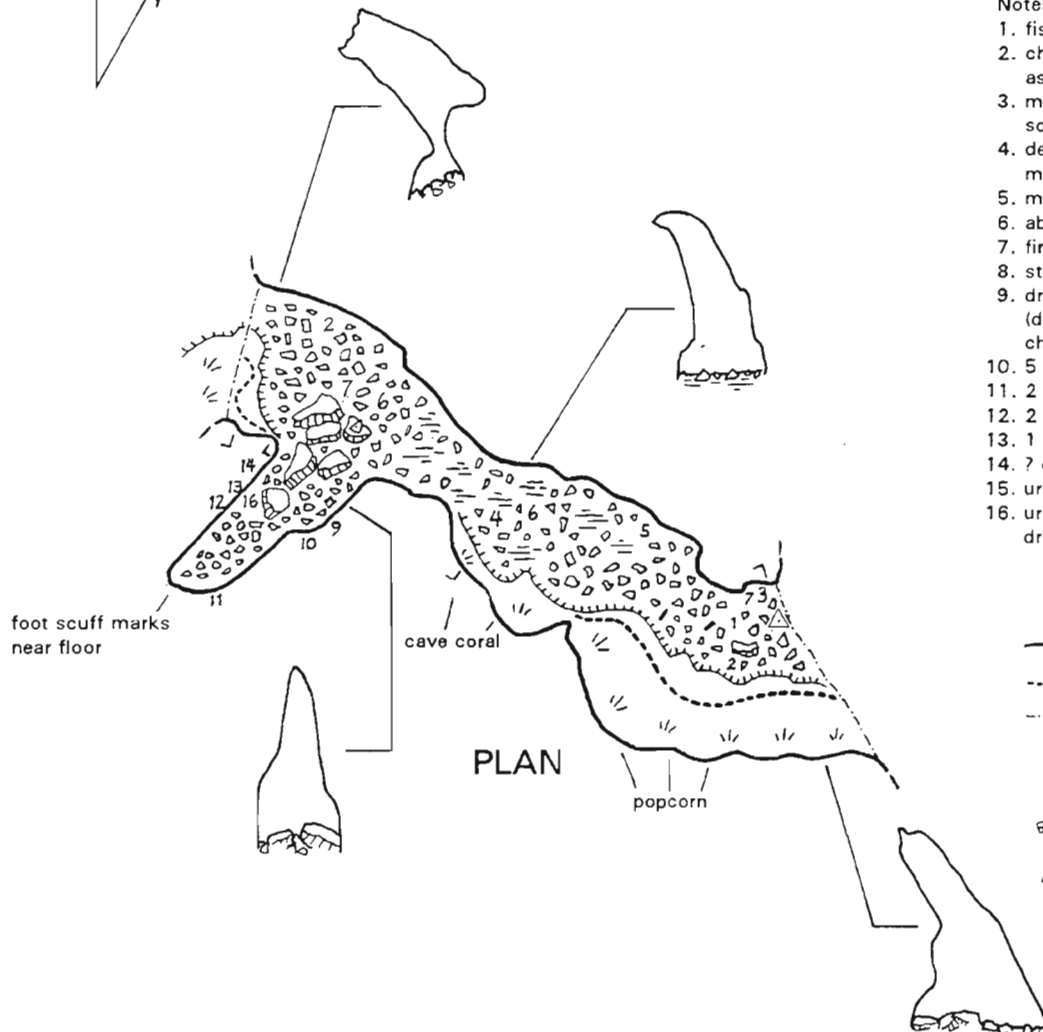


Figure A, Report #191. A charcoal pictograph of unknown date.

THUNDERING SEA CAVE

Survey Length- 101.8 feet
Survey Depth- 6.9 feet

Compass, clinometer and tape survey, July 20, 1994 by M. LaPerriere, C. LaPerriere and K. Allred.
Tongass Cave Project. Map by C. and K. Allred.

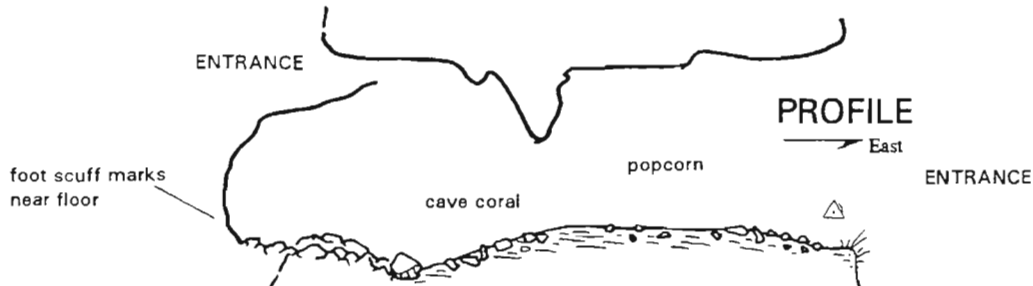


Notes:

1. fish jawbone?
2. chiton plates (diggings in ashes of nearby fire pit)
3. mussel shells along walls, some with popcorn
4. deer skeleton, one bone may be burned
5. mussel and clam shells
6. abalone fragments
7. fire pit?
8. sticks
9. drawing of raven head? (drawings are probably charcoal)
10. 5 foot wide drawing of face
11. 2 foot wide drawing of face
12. 2 foot high drawing of flower
13. 1 foot high drawing of bird
14. ? obscured art
15. urchin shell
16. urchin shell on ledge, under drawing of flower

LEGEND

- passage wall
- - - underlying wall
- - - entrance dripline
- slope (down to right)
- ledge (down to right)
- ⊞ rock fill
- △ datum



0 10 20 40
scale in feet

© 1994 by Carlene Allred

formative trip through the colorful, unbelievable world of underground caverns.

The question, "What is a Cave?" is answered in word and picture through descriptions of lava-tube, sea, sandstone and limestone caves with accompanying color picture(s). Color also dominates the scenes of underground formations (speleothems), most often found in limestone caves. In addition to the tubular and conical stalactites, Day has captured the majesty and mystique of the stalagmites, popcorn, gypsum flowers, cave pearls, cave draperies, flowstone, and helictites.

The thrill of adventure when exploring caves is counterbalanced by safety guidelines for the caver. The author warns the unwary about the unknown. Although many passages may allow a person to walk upright, eventually most cavers have to crawl or wriggle through tight passages that could have loose rocks and/or mud. In order to have a safe adventure, a number of rules are listed along with the proper equipment. The rules are explained simply.

Among the unknowns inside the caves are plants and animals that live in a world without light. These include the cave crab, cave salamander, and cave cricket. There are also animals from both worlds that inhabit caves, such as bears, bobcats and raccoons.

Aside from the words associated with caves and speleology, the book is easy reading and provides the basics for understanding how caves are formed, how they are decorated and why they should be protected.

The author, Stephen Kramer, teaches elementary school in Vancouver, WA, where he lives with his wife and two sons. Kenrick Day, winner of numerous national and international awards for his cave photography, lives in Bolivia where he and his wife are missionaries with New Tribes Mission. He has been an avid caver for over 30 years and served as a director of the National Speleological Society for seven years.

Editor's note: A copy of Caves arrived in the mail, from a good friend who knows of my involvement with caves. It is reviewed here as an example of cave books written for elementary school children. This is not an endorsement or recommendation

ATTENTION

Don't forget to vote and pay dues

A ballot is included with this issue and the dues reminder will be sent separately.

Southcentral Meeting..... March 14, 7-9 p.m. at

Elmer's at 711 E. Fireweed Lane in Anchorage
Speaker: Robert Hicks Topic: "Cave Diving in
Yucatan, Alaska and Elsewhere" Admission \$2

LETTERS

Glacier Grotto Dale Kanen, Craig District Ranger
Anne Archie, Thorne Bay District Ranger
United States Forest Service
Craig and Thorne Bay Alaska

August 8, 1995

Dear Anne and Dale,

As the President of the Glacier Grotto I wish to thank both of you and the United States Forest Service for the continued support during this past summer of caving. I would also like to thank all the USFS employs of your districts that helped make our caving expeditions a success.

From my prospective, I felt the 5 weeks we spent officially caving for the USFS was very productive. The amount of cave passage surveyed and explored on Heceta Island, I am sure will be phenomenal by any standards. I also felt having Steve Lewis as the pre-expedition organizer and leader during the expedition was an extremely good decision by your offices. No one worked harder to insure the expedition was a success than Steve did. Because of his hard work Steve is extremely respected by all the cavers associated with this years expedition.

A further thanks to both of you, Barb Stanley and Jim Baichtal for attending the meeting we held on August 4th in Craig. All of the cavers that attended this meeting felt it was productive, and we all appreciated your support.

I would also like to personally thank you for allowing me to be part of the June archeological, and geological expeditions to Heceta Island. The one week spent with Jim Dixon and the following week spent on the Tongass Ranger out on Heceta Island proved to very educational for me. The things that I learned from the geologists and archaeologists during those two weeks have already helped make me become a better caver.

A special thanks also goes to both Ranger Districts for the support to Alaska Cave Rescue (ACR). This past rescue practice session went extremely well, and we owe much of that success to the USFS. I would also like to acknowledge the hard work that Cat Woods continues to put in as the Liaison between the USFS and ACR.

Anne, I would like to ask you to please keep both the Grotto and TCP informed on the mitigation measures that your office takes in regards to the wind fall above Bridal Vale Cave. Members of both TCP and the grotto are extremely concerned about the well being of such a special cave. Bridal Vale Cave is truly one of the wonders within the Thorne Bay Ranger District, and warrants whatever measures are necessary to protect it from further harm.

As mentioned during the meeting on the 4th the Grotto would be most interested in helping select any caves that will be directed access by the USFS. Also, please don't hesitate to ask us for volunteer help constructing the proposed viewing platform at Star Light or help constructing trails to selected caves. During grotto meetings here in Ketchikan there has been much interest shown in helping with these projects.

Thank you again. I am looking forward to working with both of your offices in the future.

Sincerely,

Marcel LaPerriere, President Glacier Grotto

Forest Supervisor
Ketchikan Area
Tongass National Forest
Attn: Control Lake EIS
Federal Building
Ketchikan, AK 99901

November 15, 1995

To Whom it Concerns,

After reviewing the Draft Control Lake EIS documents I was glad to see that some of the units that contained karst and caves have been dropped or deferred. As one of the people that helped map caves in 596-405, I was especially glad to see it dropped, or deleted. Obviously, members of this Grotto would like to see all units containing moderate to highly developed karst dropped completely, and permanently.

We continue to be concerned about karst and caves that might be discovered during harvesting. After hiking through a few of the proposed Control Lake units, karst and caves seem to be scattered and well hidden. An example would include the small pocket of karst and a cave in unit 577-407. At first glance this unit would appear to have no karst. My question is how many more small pockets of karst are hidden in unlikely places, and how will newly discovered caves and karst be protected?

The Ketchikan Area of the Tongass has done a commendable job of recognizing the value of karst and caves. However, members of this Grotto remain concerned that as timber becomes harder and harder to find that caves might once again be sacrificed in order to supply timber to KPC. This is why we would like to see units dropped not deferred.

Along with other members of this Grotto I have seen the poor regeneration on some karst. We have also seen first hand the impact on caves that timber extraction does have. We have seen first hand untold destruction to once pristine cave systems. We strongly feel that past destruction of caves and karst should not be repeated.

Even though it appears that the Control Lake area has very little karst, caves must still be protected fully under the National Cave Resources Protection Act. Please keep that in mind throughout the entire process of timber extraction. Please also keep in mind that tectonic and talus caves are often found in non-karsted areas, but they still warrant protection.

Sincerely, Marcel LaPerriere, President



NORTHWEST REGION DIVIDED

from Muddy Litter Letter September/October 1995
Issue 26

During its summer meeting at the 1995 NSS Convention in Blacksburg, VA, the National Cave Rescue Commission (NCRC) Board of Regional Coordinators (BORC) voted to divide the current Northwest Region into the Pacific Northwest Region (WA, OR and AK) and the Northern Rockies Region (ND, SD, CO, WY, MT and ID). The current North Western Region Coordinator will assume the position of Northern Rockies Region after the appointment of the Pacific Northwest Region Coordinator.

In addition to filling the position of Regional Coordinator, the NCRC BORC is looking for someone to act in the capacity of Financial Officer. This person would be the interface between the NSS Treasurer and the BORC and the regions. This person would not be responsible for keeping their financial records, but assist these groups in developing plans and methods to assure that all financial matters are handled and documented correctly, completely and in compliance with the requirements of the NSS and other auditing agencies.

This person also would provide technical advise and guidance to these groups with budgeting, financial planning and other matters as requested. The job description for this position is being formulated at this time and input from qualified candidates would certainly be welcome in it development.

If you have questions or would like to make a recommendation, please contact Butch Feldhaus, National Coordinator, National Cave Rescue Commission, 614 North Valley Drive, Chattanooga, TN 37415.

e-mail 72114.3326@compuserve.com

NSS PRESIDENT NEEDS HELP

NSS President Dave Luckins is looking for someone who would like to work on developing a how-to manual for grottos.

Many grottos would appreciate help in setting up and operating a successful organization. Issues to be covered in such a manual include: conducting meetings, planning interesting meetings, getting people to come to meetings, resolving conflicts, setting up easy-to-use record keeping systems, encouraging future leaders and developing continuity.

If you or someone you know would give the NSS President some assistance with this project, contact David Luckins, 3683 Oakleaf, West Bloomfield MI 48324. e-mail Dluckins@caves.org

CAVES OF SOUTHEAST ALASKA

This 14-minute video on the caves at Prince of Wales Island is available from

Marcel LaPerriere
P.O. Box 9062
Ketchikan, AK 99901

Send \$15 plus \$2 for shipping to the Glacier Grotto in care of Marcel.

The colorful Glacier Grotto patches are also available at \$5 per patch.

Anchorage Area Grotto Meeting

7-9 p.m. March 14, 1996

Elmer's Restaurant 711 E. Fireweed Lane

Program: "Cave Diving in S.E. Alaska, Yucatan and Elsewhere" Admission: \$2

The Alaskan Caver

1921 Congress Circle, Apt. B
Anchorage, AK 99507

Forwarding and Return Postage guaranteed
Address Correction Requested

FIRST CLASS

38145RE
MR DAVID LOVE
PO BOX 210745,
AUKE BAY AK 99821

95

