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Dalene T. Perrigo

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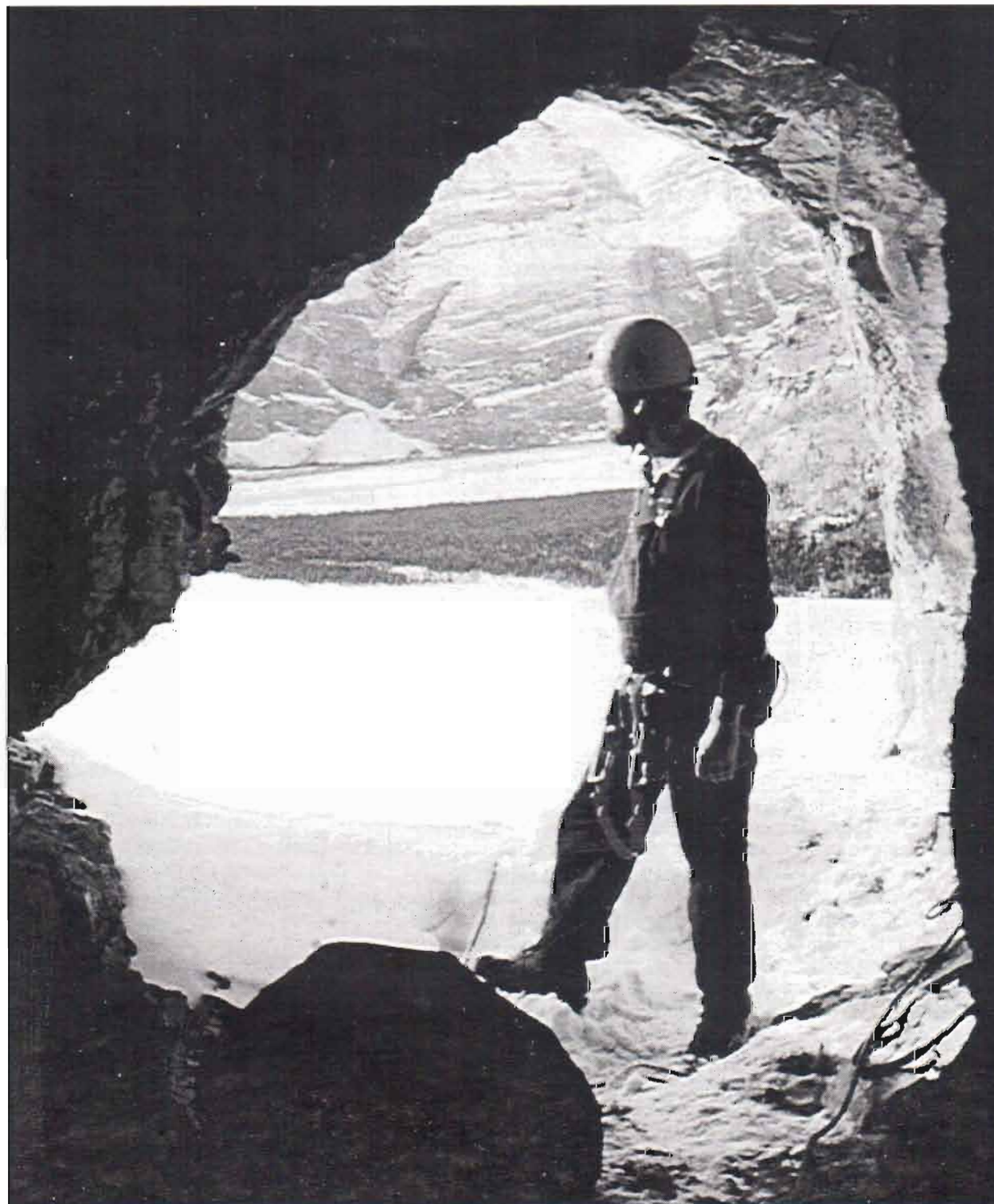
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The **Alaskan Caver**

Volume 16 Number 1

February 1996



The Alaskan Caver

published by the
Glacier Grotto©

1921 Congress Circle, Apt. B, Anchorage AK 99507

Dalene T. Perrigo - Editor

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Cover Photo: Jim Nichols at the mouth of a cave in the Wrangell Mountains. Photo: Kevin Allred

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- 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

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Wet and muddy from exploration in Beaver Falls Cave, Paul Hadfield takes a break near the opening. Photo: C. Allred

CALENDAR

May 11, 1996 8 p.m. and May 12 2 p.m. UAA
Wendy Williamson Theater, Anchorage.
(907)462-4291

June 17-July 12, 1996.....Ketchikan 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

QUESTIONS ARISE BECAUSE OF FOSSIL REMAINS IN THE ALEXANDER ARCHIPELAGO

by Timothy H. Heaton, PhD Professor of Earth Sciences
University of South Dakota

The vertebrate fossils recovered as part of the Tongass Cave Project have enormous significance and have filled a crucial geographical gap in the study of the North American fauna. Their excavation has been an exciting project featuring one breakthrough after another. Southeast Alaska, once thought to be an insignificant place that only recently became colonized by mammals, now appears to have been an Ice Age refugium and possibly a corridor for coastal colonization.

Island biogeography is a most interesting topic. The study of variation among island populations was one of the key factors that led Charles Darwin to his theory of evolution. Since Darwin's time, mathematical models have been developed to analyze island diversity in order to determine modes of colonization and rates of extinction. Island systems which have a predictable diversity based on island size and distance from the main land are said to be in equilibrium, suggesting a constant colonization rate. Systems lacking such equilibrium are thought to represent relict distributions from some former period when colonization was easier. I first became familiar with island biogeography when studying the Great Basin with its mountain "islands"

separated by broad desert valleys. The Alexander Archipelago poses an even more complex puzzle that is only beginning to be elucidated.

Southeast Alaska has special significance for two reasons. First, it lies half way between two large Ice Age refugia (Asia/Beringia and southern North America) that were biogeographically separated by continental glaciers. Second, it lies on a coastline that may have housed minor refugia with access to marine food sources. The recent glacial cover combined with rain forest conditions made any fossil record seem hopelessly unlikely, so the region remained largely unstudied while upper Alaska and the lower 48 states became famous for their bizarre Ice Age fossils (includ-

Continued on page 2

PRESIDENT'S CORNER

by Marcel LaPerriere

Recently, I have been watching my wife Connie drawing maps from last summers caving expeditions. Watching the maps come together is akin to looking at photos from that trip, but better. Whereas photos help us spark our 3 dimensional memory through 2 di-

Continued on page 3

ing extinct ground sloths, mammoths, mastodons, horses, camels, saber-tooth cats, etc.) But the situation changed when the Tongass caves were found to be sites of exceptional fossil preservation.

The irony of working the Alaskan islands is that their fossil diversity is unusually low, and yet a large share of the species recovered are exotic and therefore significant. Of the five large mammal species found at El Capitan Cave, two (brown bear and red fox) no longer inhabit the island. The only two large mammal species recovered from Bumper Cave (brown bear and caribou) fit in this category. How did fox and caribou manage to colonize offshore islands when today they aren't even found on the nearby mainland? The conspicuous absence of brown bears in the southern Alexander Archipelago used to be attributed to their recent invasion from the north and the possibility that they had never managed to reach those islands. But our cave excavations have turned up more remains of brown bears than all other large mammals combined! Obviously some important pieces of the puzzle have been missing.

While there are still more questions than answers, all the data seem to be pointing in a certain direction: the Alexander Archipelago was not completely stripped of its mammals during the Ice Age, but contained habitable land that acted as a coastal refugium. This situation is nearly certain with respect to brown bears. Post-glacial remains have been found in the two caves mentioned above on Prince of Wales Island and in Enigma Cave on Dall Island. Even more significant was the recovery of a 35,000-year-old femur from On your Knees Cave, together with a 42,000-year-old tibia of a black bear, because these remains predate the last peak of gla-

ciation. Genetic work by Gerald Shields and Sandra Talbot in Fairbanks suggests that the living brown bears of the northern Alexander Archipelago represent a distinct clade with a long history of reproductive isolation. The simplest explanation for all these data is an Ice Age refugium in southeast Alaska.

We do not yet have an adequate fossil record to determine whether animals like foxes and caribou (or even current island inhabitants like black bear and deer) survived that last glaciation on Prince of Wales Island. But even if they did not, the coastal refugium theory helps explain their post-glacial extinction in the area. As the ice melted and long-term biogeographic barriers disappeared, species expanded their ranges and came into competition from three directions (from the north, from the south, and from the coastal refugium) Retreating glaciers may have made access to some islands rather easy. Such a situation would have led to high species diversity, but only temporarily until ecological stability was reached through competition and extinction.

The goal of our future paleontological work is twofold. First, we need to establish a much more thorough mammalian record across the peak of the last Ice Age. This will help to distinguish the glacial survivors from the postglacial invaders. Second, we want to determine the antiquity of Man in the islands. The most enthusiastic proponents of the coastal refugium theory have not been biologists but archaeologists, for the coastal Pacific is one of the most likely routes for the entry of humans into North America. The presence or absence of Ice Age coastal refugia is critical to this theory, and our fossil cave mammals have provided the first long-awaited evidence that such refugia existed. I will be working closely with archaeologist Jim Dixon as the cave excavations continue.

My brief 1995 field season with Dave Love, Kevin Allred, and Jim Baichtal produced a key find toward each of these goals. The jaw and ulna of a small seal (probably ringed seal, which now only inhabits northern Alaska) were found in On Your Knees Cave and dated at 17,500-years-old, right at the last glacial peak. This suggests that the cave was open then and not covered by ice. In Kushtaka Cave we found the tip of a bone spear point together with bones of two black bears that have been dated at 8,700 years old. This appears to be the oldest known archaeological record from the island, and it helps us know what to look for as we carefully search older deposits.

I feel that we've only seen the tip of the iceberg so far. What has been found to date tells us what questions to ask as well as what to look for and where to look for it. From this point on the research will become much more interdisciplinary. Glacial and sea level geologists will locate the likely shorelines and potential glacial refugia. Cavers will search for caves that might contain fossil remains. Paleontologists and archaeologists will meticulously excavate the deposits and identify the remains. And physicists, chemists, and geneticists will determine the ages, diets, and relationships using state-of-the-art laboratory techniques. These combined methods will piece together the complex story of the Alexander Archipelago and tell us many things about the animal and human history of our continent. I look forward to working with many of you as this important work proceeds.

Two expeditions in 1996

1. Ketchicave June 17- July 12
all on Heceta Island

2. Chichagof Island Expedition
in August

Information: Steve Lewis at
(907)479-7257

mensions, maps do it one better. Let me explain.

When surveying a cave, especially a large complex one it is hard to visualize how different passages relate to each other. That is what the map does for us. We can see what passage is lowest, what passage comes closest to the surface, which one pushes furthest from our entrance, which passage goes the furthest north, south, east or west, etc. When the map is nearing completion we can see things that weren't possible without it. We finally get a mental 3 dimensional picture of the cave through 2 dimensions.

Staying motivated when surveying isn't always easy, but seeing the map helps make it all worth while. As the map materializes, the cold toes and fingers from the survey trip are forgotten, but like looking at photos all the good times are remembered. All the friends that help survey are remembered, the pretty formations come

back into one's mind, and the exhilaration of caving itself comes back.

Like all creative endeavors, cave mapping also helps give us mortal beings a bit of immortality. With any luck our maps will be around many years after we are gone. And, with any luck many other people will be able to use and enjoy them.

Many times I have had people tell me that they would like to do some caving, but mapping to them would be a bore. I guess they will never know how sweet it is without tasting it. Cave mapping can be the Turkish Delight of life.

Glacier Grotto



Box 9062
Ketchikan, Ak 99901
(907) 225-4094
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Charlie Streuli, Acting District Ranger
Thorne Bay Ranger District
P.O. Box 19001
Thorne Bay, AK 99919

February 7, 1996

Regarding: Proposed Heceta Island Sawfly Salvage Sale.

Dear Sir,

At our January meeting in Ketchikan Mike North, Jim Baichtal, and Steve Sams gave a presentation on the proposed salvage sale on Heceta Island. Since that time we have had two meetings with Ketchikan members in which we discussed the proposed sale.

During those meetings we came to the following consensus:

1. High Vulnerability karsted lands, and adjacent lands must be protected. The 1988 Cave Resources Protection Act clearly mandates the USDA/USFS to protect all caves under their jurisdiction. Therefore, no cutting of dead, dying, or green trees should take place, if it will expose the USFS to violation of the above mentioned law.
2. If any cutting does take place it must be monitored during, and after to make sure that no harm comes to any caves, or high vulnerability karsted lands.
3. A minimum number of roads should be built. Again the road building needs to be monitored to make sure there is no impact to caves.
4. If any cutting does take place, the results of that cutting must be studied. The USFS must make sure that no further damage is done by cutting at this time. (In the EMS field there is a saying "Do no further harm", this should be applied to all salvage sales!)
5. We feel that the poor regeneration on Karsted lands needs to be studied. Numerous times our members have observed the poor regeneration on karsted lands on Heceta, and throughout the Tongass.
6. We feel the question of wildlife must also be addressed in regards to karst and caves. What impact to fish and wildlife does cutting on karst have? Is further cutting in the Bald Mountain area going to impact the resurgences that are salmon spawning streams? We feel more research needs to be done on the hydrology of the subterranean system. We believe the only way this can be successfully done is with dye tracing. We strongly feel that the major insurgences between Bald Mountain and Timber Knob, must be dye traced.

Several of our members also felt that the USFS should do a complete EIS for all of Heceta Island. I personally believe that Heceta has been pecked at too many times, and that the cumulative effects of all this pecking hasn't been analyzed.

Please consider our points when planning this salvage cut. Also please remember "Do no further harm."

Sincerely, Marcel LaPerriere, President Glacier Grotto

CARBURETOR CAVE

by Charlie Larson

Northwest Caver, Fall 1995

In early fall in the Cascades, before the first snow, a patch of verdant moss is a tip-off to a cave that breathes a lot. Another way of finding caves is to follow the yellowjackets in their quest for moisture. The former is recommended.

One day in late September we surveyed a chain of small caves and openings west from Richard the First Cave. Rounding a tumulus just before heading back to the road, I saw a patch of green moss. It stuck out like a sore thumb, and moving closer, I saw a fringe of green moss being whipped by wind entering a small opening. Air flow into the 2.5 x 3-foot opening was estimated at four feet per second.

Although the wind whipped the moss around the entrance, it was inside the cave where the volume was most noticeable. Air being sucked into a low floor-level tube partially blocked by rafted breakdown created a low roar, like the sound of a waterfall or a distant train. Carburetor Cave is one of those breathing caves that are openings into a vast reservoir of subterranean air. However, on a composite cone like Sheridan Mountain that doesn't necessarily mean that it is one end of a long cave. We mapped the entry room but did not attempt to push the low crawl where the air was going. It looks as if a thin person might get through.

EVOLUTION IN THE ABSENCE OF LIGHT

by Mike Fraley from Cascade Caver Vol 34 No. 6&7

I asked my biological anthropology professor, "How could cave organisms possibly evolve without skin pigmentation?" This is Prof. David P. Tracer's reply:

Great question. There have been two proposals that I'm aware of to explain this phenomenon. One revolves around the concept of "somatic budget". Basically organisms have a pool of energy reserves that they can partition for different uses including growth and reproduction, and within "growth" to different organ systems. Given that energy nearly always seems to be a scarce resource in nature, it is advantageous to organisms to use their budgets wisely - that is, to devote the minimum amount possible to growth of various systems and the rest to reproduction. If there is a cost to synthesizing melanin pigment, which there undoubtedly is, then organisms living in an environment where melanin gives no advantage would do best to forgo its production and channel their energy into other systems or perhaps reproduction. So if there is variability among organisms

The extent of Mount Sheridan's subterranean air shed is unknown. Most of the mountain's surface is more or less sealed to air by blankets of tephra. The blanket is pierced by blocky tumuli, cave openings, summit craters where layered basalt is exposed to the atmosphere, and rarely by small blocky lava flows. Relief is relatively great and it is assumed, whatever the configuration of the air shed, that there are both high and low openings to it. In inclined, open ended subterranean air reservoirs, convection causes the air column to move in response to temperature differences between cave air and surface air. Cave temperatures are by no means constant, but they approximate Mean Annual Surface Temperature (MAST).

As a general rule, cold heavy air sinks out of lower openings during warm months (reverse chimney effect) and rises out of upper openings during cold months when the cave air temperature exceeds the surface temperature (chimney effect). However, during marginal conditions, there may be diurnal anomalies, and brief reversals due to changes in atmospheric pressure. The Sheridan Mountain air shed is probably not large enough to sustain vigorous or long term air movement due solely to atmospheric pressure changes. Air sheds on the High Lava Plains, on the other hand, are far larger and may blow for days at a time.

Air movements in Sheridan Mountain caves are legendary. Lost and Found Cave, larger than Carburetor Cave and higher on the mountain, frequently moves so much air that it can be heard inside the cave.

in melanin production (which there undoubtedly is) then all else being equal "synthesizers" should be at a disadvantage relative to organisms who don't synthesize it but channel energy into characteristics that have true utility.

An alternative explanation, and one that is by no means as accepted as the first, was proposed by C. Loring Brace at UMichigan and is called "probable mutation effect". Brace argues that mutations, most of which impair protein production or function, occur all the time albeit at a slow rate. Many of these are not seen because they are at least somewhat harmful, and are selected out. However, Brace argues that when selection for maintenance of a particular character is relaxed, that gives opportunity for mutations to creep in and be maintained. So he argues that the lack of pigmentation in cave dwelling creatures is the result of mutations which impaired pigment production (incidentally, this type of mutation is for some reason one of the most common in animals) and because there was no advantage or disadvantage to them (neither selection for or against them), they were just perpetuated on. Again this theory is not well regarded but it's interesting nonetheless.

THE COORDINATOR'S CORNER

by Joe Ivy

Excerpts from The Texas Caver, June 1995

Printed in Muddy Litter Letter - September / October 1995

As Texas Regional Coordinator of the National Cave Rescue Commission, my job description includes the facilitation of cave rescue training and dissemination of cave rescue related information. "The Coordinator's Corner" is one way that I will try to accomplish these goals.

Let's cover the Good Samaritan Law. Most states have what is generically called a Good Samaritan Law, which is designed to protect rescuers from prosecution. In Texas, our Good Samaritan Law has the "Reasonable Man" clause that puts a caveat on the law. You are protected only if you *do not exceed your level of training and competency*.

For example, let's say that you're caving in Travis County (near Austin) with a group of new grotto members and one of them falls and is injured. The injured caver is complaining of various aches and pains, including back and neck pain but otherwise feels okay and none of the pain is excruciatingly debilitating. You decide that the injured caver is okay to exit under his/her own power with assistance, since there are no obvious injuries (*obvious* means bones protruding from the skin and such). However, after exiting the cave, the injured caver stumbles on the way back to the vehicles and goes into seizure. This is a horrifying thing to see so you call 911 as soon as you can.

The ambulance arrives and takes the caver to the hospital where it is discovered that there was substantial c-spine and t-spine damage caused by the fall ("c-spine" or "cervical spine" refers to your neck and

"t-spine" or "thoracic spine" refers to the spine approximately even with the chest.) This would have been fine if the injured caver had then been placed in a spinal immobilization unit like the OSS or SKED before being allowed to move. But you had them get up and this allowed much more profound damage to occur - the caver is now paralyzed from the chest down.

If the family or the injured caver sues you, their lawyer will ask you in court what training you have that would enable you to decide whether or not a person injured in a fall is okay. Are you a paramedic? Are you an EMT? Were you a paramedic/EMT/doctor at some point in the past? If the answer is "no", you exceeded the limits of your training and you will be paying that lawyer and that family for a long, long time.

The fact that you might have years of caving experience does not mean a thing. The fact that you were a well intentioned good samaritan does not mean anything either. Their lawyer will say that you were indeed a well-intentioned good samaritan, but a REASONABLE MAN would have left the cave and called 911 because in the eyes of the law, that is the best thing to do. The injured caver was in no *imminent danger* and therefore could have waited there until trained, competent help arrived on the scene.

Now, if the cave had started to flood from a sudden cloudburst outside, you would have been protected because the injured caver would have definitely died if he had remained in the cave any longer. Otherwise, you are in serious trouble.

What's the upshot of all this scary, doom-and-gloom information? Well, it is so that YOU as a caver in our modern-day, litigious society are aware of the possible consequences of attempting a self-rescue without any training.

I have been involved with the NCRC for several years, am currently an active instructor as well as the Texas Region Coordinator, and in the scenario described above I would not have moved that injured caver - and I know how to put a spine splint on a patient with possible spine injuries! Instead, I would have called the folks I know in the Austin FD/EMS that are trained in cave rescue and let them handle it and assisted them in any way I could. Why? Because I am not a doctor or paramedic. In a wilderness setting (west Texas or Mexico), I wouldn't hesitate to use my training to deal with the described scenario, though I would have put the injured caver in a spine splint and gotten him/her to the nearest hospital as quickly as possible. The point is, if there are 911 services available where you are caving and someone gets injured during a caving trip, you should err on the conservative side and call 911 to protect both yourself and the injured person.

Obviously I'm not advocating calling 911 where someone slips and gets a "boo-boo on their wittle knee". But if someone falls and has any sort of back/neck pain or breaks a major bone (like the femur), you should call 911.

(turn the page for a look at the Good Samaritan Law in Alaska)

POSTSCRIPT

by Marcel LaPerriere

As the past chairperson of Alaska Cave Rescue, I am writing a post-script to Joe Ivy's great article.

In Alaska there is a Good Samaritan Law that will cover us in many instances. As I understand the Good Samaritan Law, it basically covers someone who stops to help out at an accident scene, or administers CPR. However, once a person takes on an implied level of *professionalism* the Good Samaritan Law looses much of its teeth. As Mr. Ivy pointed out, a lawyer could eat a trained rescuer alive, if the rescuer exceeds his/her level of training.

Also, in Alaska there are three levels of negligence. The first level would be a basic mistake that anyone could make. For instance, searching down a wrong passage of a cave during a search. The second level would be a mistake that is made even though you are trained not to make this mistake. An example of this would be misreading a compass, or tying a knot wrong. And, the third level is what is referred to as "Gross Negligence". An example of this

would be to use 1/4 inch rope for a hauling system, when you know that 7/16 rope is the minimum. As it has been told to me, if the negligence is at the first level, it would be very hard to be sued. If you are negligent to the second level, you will most likely be sued, but you have a chance of winning. But, if you are grossly negligent, your chance of winning a suit is about the same chance a snowball has in hell.

In this state most land based rescues fall under the jurisdiction of the Alaska State Troopers. In the event of a rescue, volunteer organizations work for the Troopers. This means all major decisions, like when to start or stop a rescue is the decision of the Troopers. The Troopers and volunteer rescue organizations are guided by a whole array of laws and state statutes. For instance, by state law it is illegal to run a rescue without first notifying the Troopers. Any rescue organization must follow these laws or statutes to help reduce liabilities.

Another term that has come into

the courts over the last few years is, "Standard of Care". In a nut shell, "Stand of Care" means that all patients can expect a certain "Standard of Care". This applies to a patient if a heart attack victim, or a victim of a caving accident. In the event of a lawsuit the defendant would have to prove that he delivered the highest "Standard of Care", and did no further harm to the patient. For instance, it is my understanding that the courts have determined that a heart attack patient is entitled to the same "Standard of Care" whether the heart attack happens in Los Angeles or Nome, Alaska. This means that a cave rescue organization, no matter how small or remote would be held to the same "Standard of Care" level that would be expected in Georgia, California or any other place in America. This is why training and rules are so important.

After reading this, if any of you are interested in learning more about cave rescue you can contact me, either by phone or mail.

Second Annual Speleo Camp at Trout Lake Puget Sound Grotto May 24, 25, 26, & 27

INVITED: All grottos of the Northwest are invited and encouraged to attend this weekend of caving and fun. The event will be held at the group campground within Gouler County Park in Trout Lake.

DETAILS: Cost is \$7.00 per person. This fee covers dinner Saturday night and campground fees. Register with Puget Sound Grotto. Make checks payable to:

Puget Sound Grotto
Attn: Mike Compton
PO Box 293
Yelm WA 98597

ACTIVITIES: BBQ chicken & spaghetti dinner
Guided trips to many of the local lava tubes
Vertical practice
Grotto stores
Cave rescue seminar, and
Much, much more

REGISTRATION: Cave rescue seminar, registration will be taken at the event on a first come first served basis and will be limited to the first 20 applicants. There will be a nominal fee.

INFORMATION: Mike Compton at (206)535-5144
e-mail NCACAVR@aol.com

NEWSBRIEFS

B.C. Caver 9(4) July/August 1995 P.11. Large bone deposits found in Pellucidar are an important window into the distant past. The recently installed gate enables easy and controlled access for members of the scientific community. Behind the gate are bones of the marmot, deer, bear, mouse, hawk and a mountain goat bone dated at 14,000 years (first ever found on Vancouver Island). Another tantalizing glimpse of the past is provided by the perfectly preserved tracks and scratch marks of a bear.

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New York Grotto News 35(1) March 1995 p. 4. Recent discoveries in the downstream end of Big Ridge Cave (Mifflin Co., PA) have produced extensions in the length and depth of the system, and the potential exists for Big Ridge to exceed Laurel Caverns as the state's deepest cave. Laurel is 464 feet deep.

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The Hollow Earth News 2(5) May 1995 p. 16. George Huppert, in his article "Kentucky in the Springtime", states that the cave education program is going well since publication of a curriculum manual for educators. The organization placed its 100th gate this summer. There is \$470,000 to spend on the museum and future plans include buying an adjacent building and cave property.

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The Explorer December 1995 p 166-7. The in-cave survey of Church Cave now totals over three miles. This is the third year of the Church Cave Survey project, part of the National Speleological Society's Sequoia Caves Conservation Task Force. One the priorities is to use the state-of-the art survey and map to create a digital 3D rendering of the complicated cave system.

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The Speleograph 32(1) January 1996 p. 8. If exposed to wind, cold, and wet THINK HYPOTHERMIA. Believe the symptoms, not the victim, when watching for the following signs: 1. Uncontrollable fits of shivering. 2. Vague, slow, slurred speech. 3. Memory lapses. Incoherence. 4. Immobile, fumbling hands. 5. Frequent stumbling. Lurching gait. 6. Drowsiness (to sleep is to die.) and 7. Apparent exhaustion. Inability to get up after rest.

The best defense against hypothermia is to dress properly and stay dry. Also, fuel your body often with small amounts of food, and finally, avoid getting overfatigued.

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Georgia Underground 32(1 and 2) January 1996 p. 1. The first edition of 1996 carries a story of the Kazumura Cave Expedition on the "Big Island" of Hawaii by Carlene Allred. The total survey length, including overland and segmented portion is 213,445 feet. (Reprint)

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Birmingham Grotto Newsletter February 1996, p. 20. Quoted from News & Notes by Dave HowellI did want to discuss a disturbing rumor I heard. It seems that the newly discovered 4th big room in Camp's Gulf can be reached either by a two-hour "conventional" route or a 10 minute "shortcut". In talking with some ... cavers we met, we heard that plans are being made by members of their Grotto to blast this shortcut closed. The reasons given varied from "keeping the riffraff out" to "minimizing traffic to the nicely decorated 4th room." Can this be true? These reasons as well as any others I can imagine, seem highly questionable. Are we really at the point where we must preserve caves by dynamiting passages? If so, we the caving community - and particularly those of us with explosives in our hands - need to step back and take a hard look at the direction caving is going. Surely there's a better way. (comments are invited. Send them to Birmingham Grotto Newsletter, PO Box 55102 Birmingham, AL 35255-0102.)

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Julius Rockwell, Glacier Grotto Librarian, has several copies of foreign caving journals that are available for perusing. Stalactite, published by the Societe Suisse de Speleologie, has articles of caving expeditions to foreign countries (China, Mexico) as well as scientific papers on subjects such as climatic observations. The latter makes use of charts, graphs, maps and photos.

SpeleoCAI, registrazione Tribunale di Perugia Settembre 1995, features a 3-foot by 4-foot map of Aree Carsiche D'Italia. This is in response to requests for a map of the Italian karst and accompanies the story on this subject. The magazine makes good use of photographs.

Progressione 30, a slick covered scientific journal written in Italian, is published by Societa Alpina deelee Giulie in Trieste. Graphs, charts and photos are used throughout and this edition has two large separate maps.

Der Frankische Hohlelenspiegel, November 1995, has a Numberg, Germany, address. There are papers, articles, maps and many cartoons in addition to charts, graphs and drawings.

If interested in reading any of these, contact Jay.

GOOSEBERRY GROTTO

Kuiu Island, Alaska • Preliminary Report #S3

Tongass Cave Project • National Speleological Society

by Pete Smith, edited by Kevin Allred

January 18, 1996

DESCRIPTION:

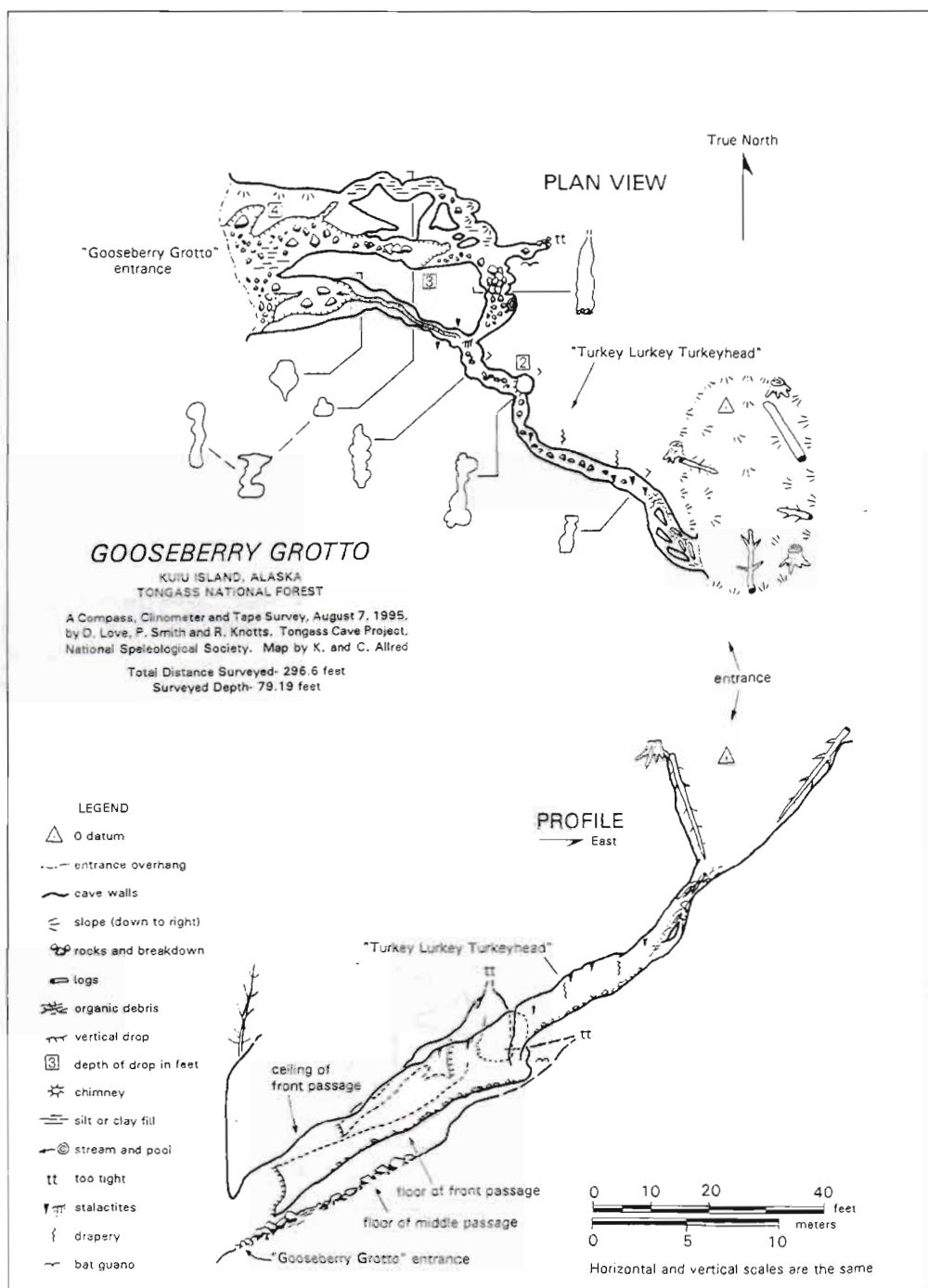
Gooseberry Grotto is located to the North of, but in the same block of carbonate rock as Hooter Cave. The area surrounding this cave has been clear-cut recently. There has been some infilling with woody debris of the upper entrance to the cave, but the pocket in which the entrance is located is essential for preserving the opening. The lower entrance is in the bottom of a bluff, where there is a pleasant overhanging grotto.

This cave is a tight vadose canyon system. There are two entrances, which make for significant air flow in the cave. The older, higher level of the cave holds many fossil speleothems, including a classic "turkey head". There are popcorn covered stalactites and stalagmites as well as a nice example of rimstone dam. Some bat guano was noted.

MANAGEMENT RECOMMENDATIONS:

We recommend that this cave be classified as limited access. The speleothems are fragile, but since they are located in the upper level of the cave, a careful spelunker could make a trip through this cave with little negative impact. At this point there will be no sur-

face management activities in the near future that will impact this cave.



RIVER ENDS CAVE

Prince of Wales Island AK • Preliminary Report #274
Tongass Cave Project • National Speleological Society

by Kevin Allred
January 18, 1996

DESCRIPTION:

River Ends Cave was first identified on aerial photographs and later investigated by Dave Herron, who reported that a large resurgence entered a cave entrance with air flow, but a chain saw would be needed to con-

tinue through logs blocking the way. The cave is formed in Heceta Limestone, and located at the bottom of a sink-hole on a bench area on the west side of Maggie Mt.

Members of the team investigating this lead were Amy Russell, Carlene Allred, Paul Hadfield, and Pete Smith. Paul and Pete were able to dig through woody debris to

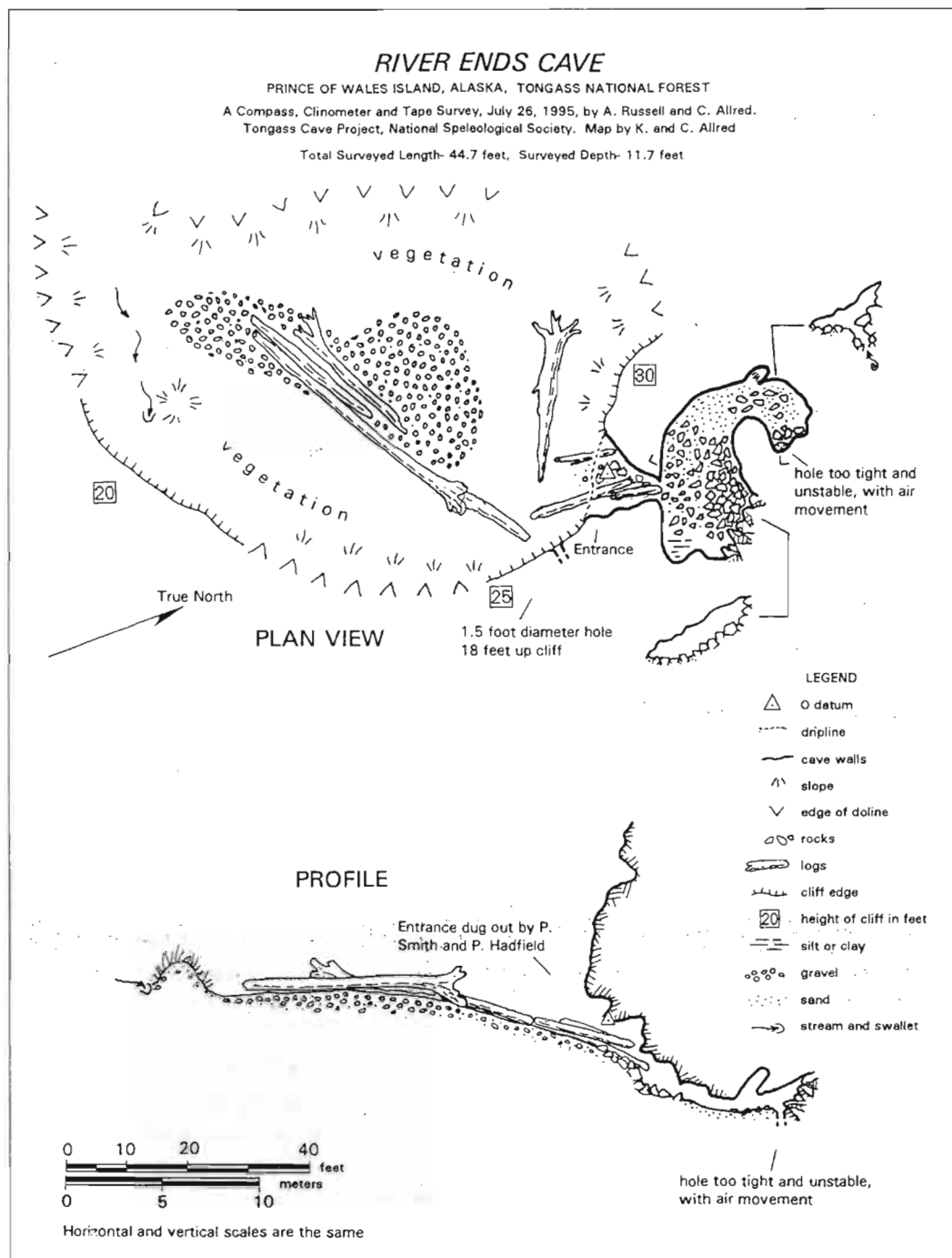
get into the cave. Beyond the entrance, a broadly hooked, low gallery soon ends in a breakdown slope at one end, and a too tight hole in the floor in the other end. There is air movement in the hole, but it was deemed too unstable to push.

The hole 18 feet up the headwall cliff from the entrance was not investigated. The total surveyed passage is 44.7 feet and the depth is 11.7 feet.

MANAGEMENT RECOMMENDATIONS: Although River Ends Cave is short, it is a major resurgence for a recharge area estimated at .75 square mile. Approximately 1/4 of this area has been negatively impacted by road building and logging.

We recommend no further logging in the recharge area to minimize further sedimentation of the cave.

The system has not been dye traced as yet, and the resurgence or resurgences are unknown.



CHOKED CAVE

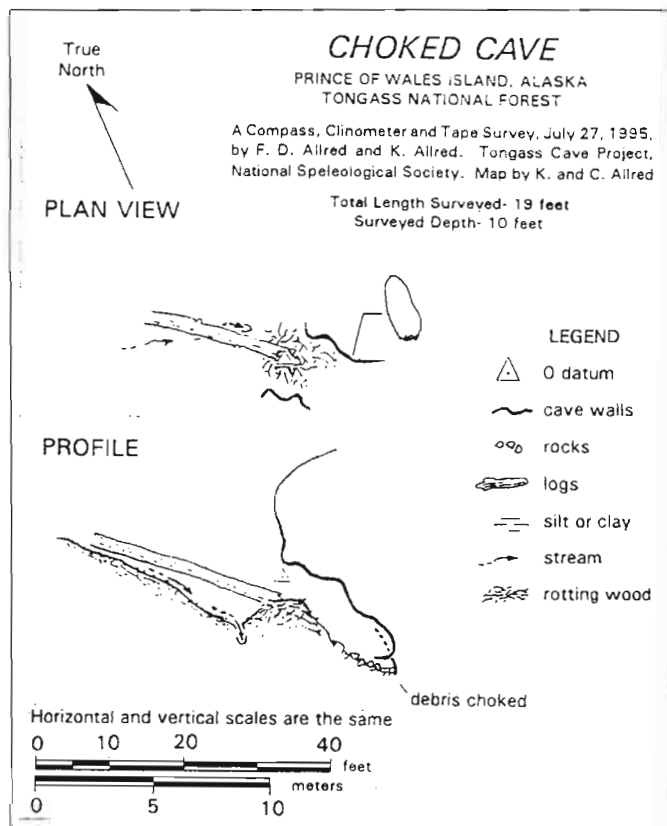
Prince of Wales Island, AK • Preliminary Report #272
Tongass Cave Project • National Speleological Society
by Kevin Allred
January 18, 1996

DESCRIPTION:

Choked Cave was discovered by Flint and Kevin Allred on July 19, 1995. Formed in Heceta Limestone, and located in the Turn Creek Drainage on the Southern slope of El Capitan Peak, Choked Cave is a main resurgence swallet for a deep ravine in old growth forest. Surveyed depth is 10 feet, and the length is 19 feet. The cave is debris choked. No invertebrates were noted.

MANAGEMENT RECOMMENDATIONS:

The resurgence of Choked Cave is not known. Although we did not follow to stream course up the slope to find its source and see if it originated from the adjacent clearcut, there seemed to be a large amount of debris which had washed into the cave. In order to assure that further sedimentation will be held to a minimum, we recommend that no (further) logging or road building in the recharge of the cave. The cave could be visited by limited numbers of the general public if the steep gully slopes were not eroded by travel. This, and other nearby caves could be dye traced to determine their relationship to Roaring Road Cave.



KUSHTAKA CAVE

Prince of Wales Island AK • Preliminary Report #270
Tongass Cave Project • National Speleological Society
by Carlene Allred
January 18, 1996

DESCRIPTION:

Kushtaka Cave, formed in Heceta (Silurian) Limestone was discovered in the early 1990's by several youth who reported its location to Rob Knotts. The two entrances are small, and lie between cliff tiers just inland from a small cove containing possible remains of an ancient canoe haul out. Both entrances have animal trails leading into them, and the cave has evidence of being used by bears, large birds, and man.

Kushtaka consists of a single unbranching phreatic-type passage, two meters in diameter, and 41.2 meters long horizontally. The cave is partially filled with sediments. The southwestern portion, between the two entrances has a floor of rock and silt, with a crawl space about one meter high. Just inside the south entrance is a small dry room with a ceiling three meters high. On the floor in here was found a two cm. square chunk of obsidian in gravel of a depression where the surface silt had washed away beneath a ceiling drip. Further inside, an otolith was noted, and also some sticks that may possibly be charred. As one continues on into the cave, a large bird nest, probably from a cormorant, is located just before reaching the Northern entrance, which opens up into the middle portion of the cave. The nest is 1.8 meters (6 feet) wide overall, and the depression in the center is one meter in diameter. The nest contains no evidence of having ever been used.

The remaining 28 meters of cave continues northeast of the north entrance, and is filled nearly to the ceiling with sticky mud. Exposed on the surface of the fill are many bones, some obviously from bears. A bear track can clearly be seen in one area. Fish bone also is scattered throughout. About five meters from the end of the cave (which terminates in fine sediment fill) a bone point or awl was found. How it happened to be in such an inaccessible part of the cave is a mystery.

MANAGEMENT RECOMMENDATIONS:

The location of Kushtaka should not be shared with the public because of the rich paleontological and archaeological resources.

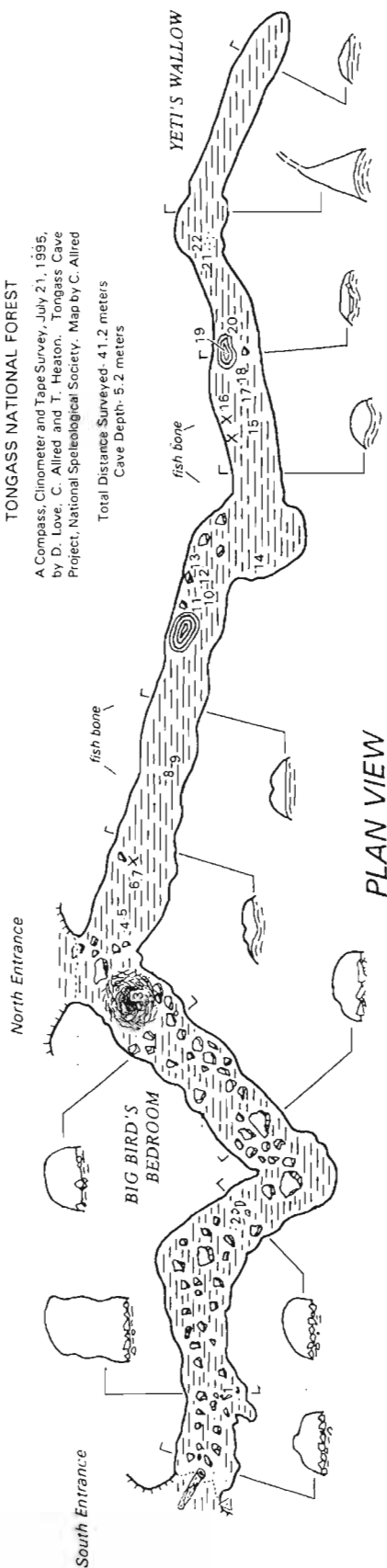
This cave should be excavated and studied further by specialists. The area has outstanding pristine outdoor setting.

KUSHTAKA CAVE

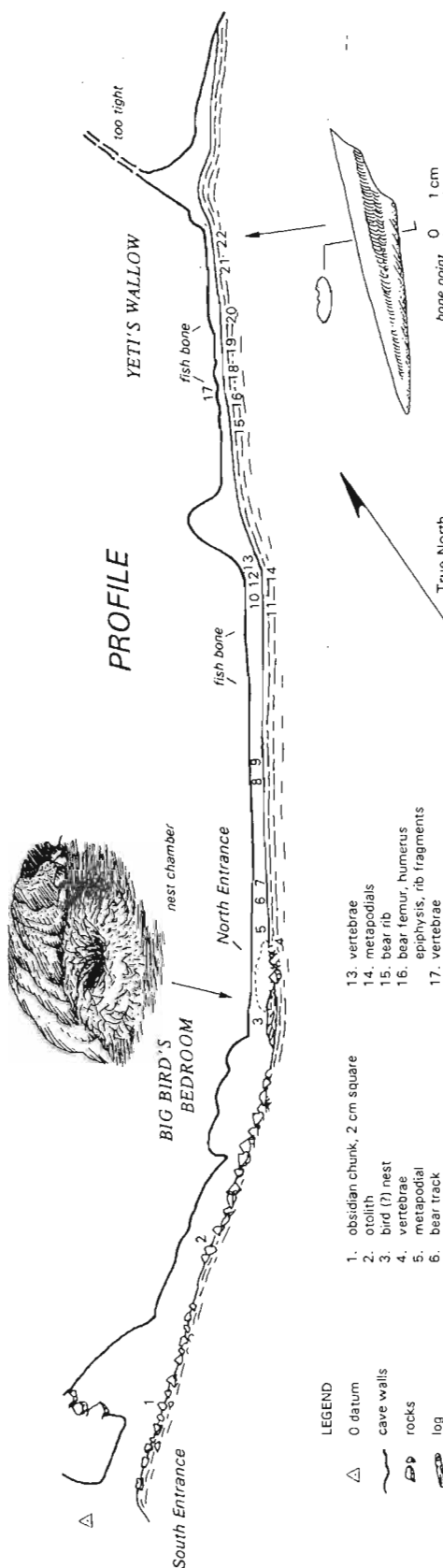
PRINCE OF WALES ISLAND, ALASKA
TONGASS NATIONAL FOREST

A Compass, Clinometer and Tape Survey, July 21, 1995,
by D. Love, C. Allred and T. Heaton. Tongass Cave
Project, National Speleological Society. Map by C. Allred

Total Distance Surveyed: 41.2 meters
Cave Depth: 5.2 meters



PLAN VIEW



PROFILE

LEGEND

- | | | | |
|---|-------------------|-----|---------------------------------------|
| △ | 0 datum | 13. | vertebrae |
| — | cave walls | 14. | metapodials |
| • | rocks | 15. | bear rib |
| — | log | 16. | bear femur, humerus |
| — | cliff face | 17. | vertebrae |
| — | silt fill | 18. | metapodial and rib fragments |
| — | entrance dripline | 19. | metapodials, phalanges, rib fragments |
| — | pool | 20. | two ribs |
| X | test pit site | 21. | rib |
| | | 22. | bone spear or arrow tip, or awl point |

Horizontal and vertical scales are the same

© 1995 by Carlene Allred

SUPERSTITIOUS CAVE

Heceta Island Alaska • Preliminary Report Tongass Cave Project • National Speleological Society

by Steve Lewis

March 11, 1996

DESCRIPTION:

Superstitious Cave is formed along a steeply dipping bedding plane. The entrance to the Cave is very hazardous, with large slabs ready to slide into the cave with little provocation. An unsurveyed stream may lead to Holy Water Falls although volume at the falls suggests a different or additional source. Several short drops lead to sloping breakdown covered passage, and finally to a too tight end, with voice connection to Big Fatty Cave.

GEOLOGY/HYDROLOGY:

The cave is formed along a bedding plane in fossiliferous limestone. No speleothems were noted. The cave takes water from a nearby muskeg.

BIOLOGY:

No cave life was noted, nor were any animal remains observed.

RECREATIONAL/AESTHETIC VALUES:

The cave is too hazardous for recreational use. It is in a highly developed karsted forest and as such, is important recreationally and aesthetically for the surface based explorer.

MANAGEMENT RECOMMENDATIONS:

This cave is important. It is probably a part of the very large Arabica Cave system, at least hydrologically. Access to the cave should be limited and the entire surface and subsurface karst ecosystem protected.

MANJA ROOMEN CAVE

Heceta Island AK • Preliminary Report Tongass Cave Project • National Speleological Society

by Steve Lewis

March 11, 1996

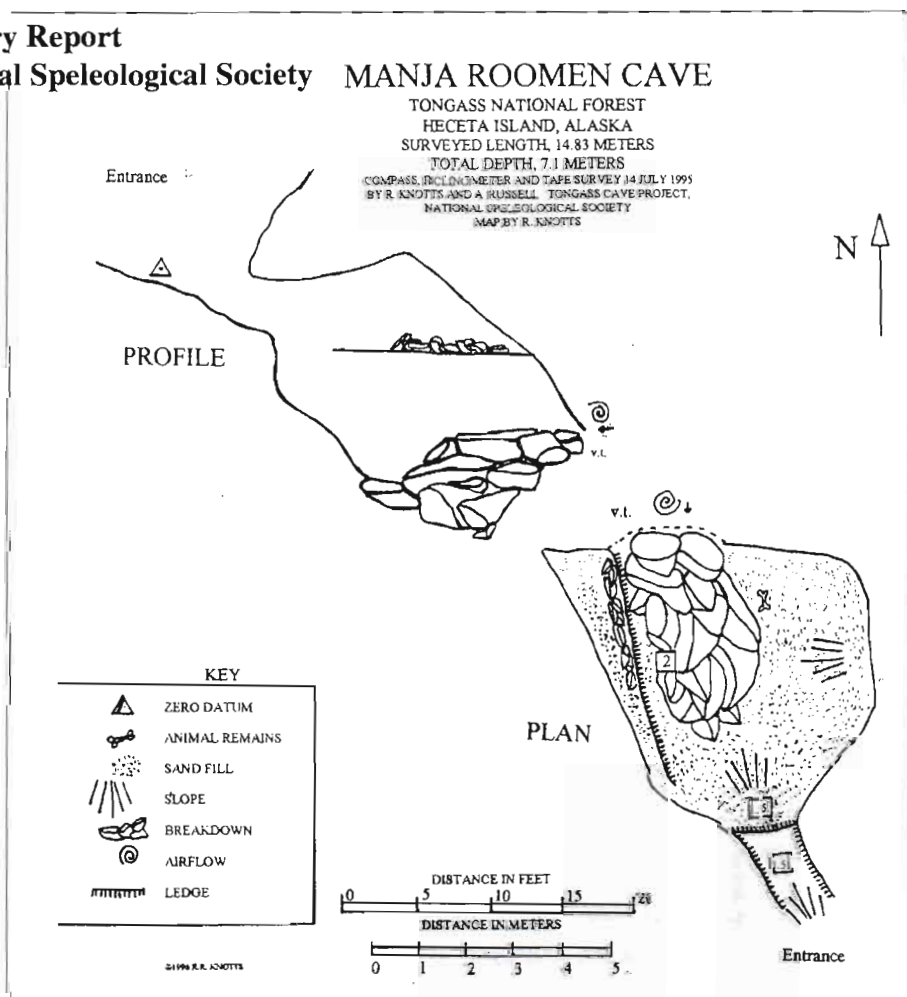
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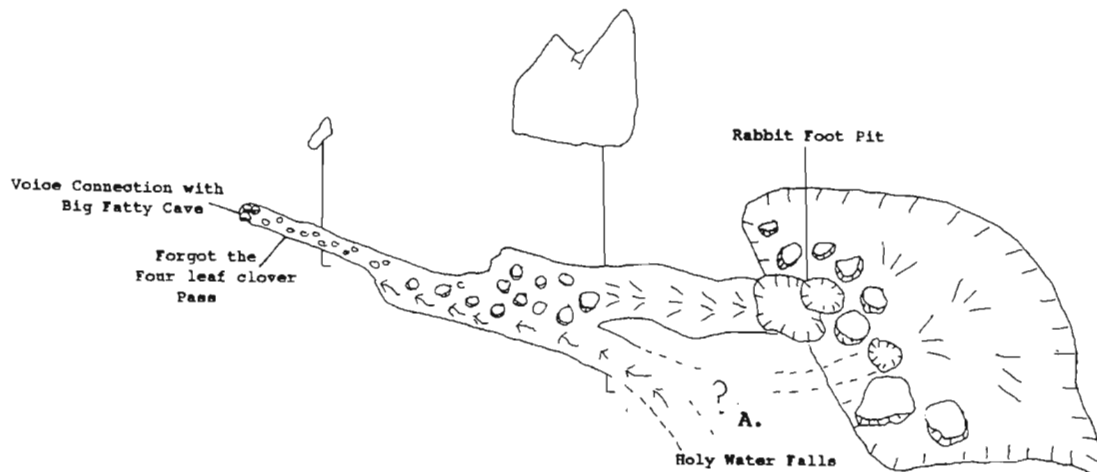
Manja Roomen Cave is a small cave located in one of many large sinks in a large clear-cut on Heceta Island. It's floor is covered with large breakdown. A very, very tight lead is blowing air and may have potential as a dig.

Skeletal remains of a deer were noted. No speleothems, cultural evidence or cave biota were noted during surveying.

MANAGEMENT RECOMMENDATIONS:

The cave is safe enough for directed access although its environs contain numerous hazards including deep pits and the need to travel through a highly karsted clear-cut. Therefore access should be limited to those capable of dealing with these hazards.

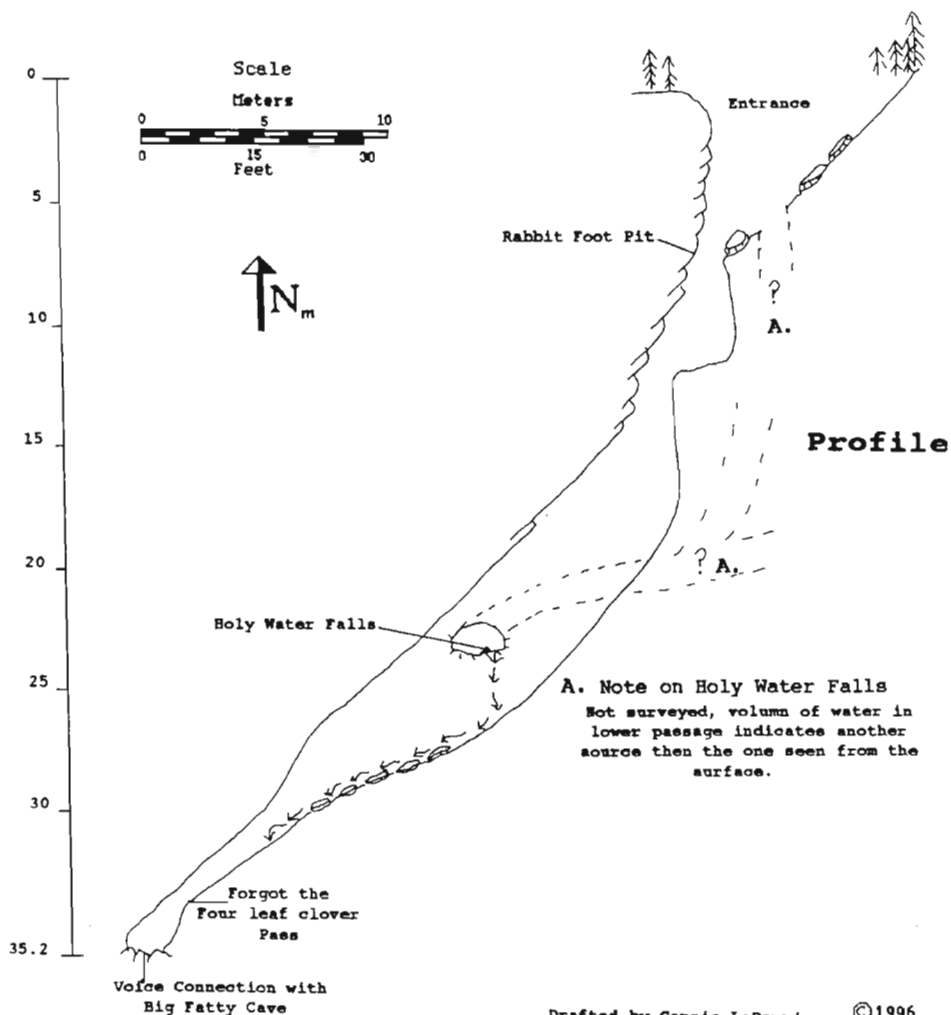




Superstitious Cave

Plan

Hecata Island, Alaska
 Surveyed length 53.42 meters (175.2 ft)
 Surveyed depth -35.2 meters (115.5 ft)
 Compass, clinometer, and tape survey
 1995 by Shunishiro Go and Marcel LaPerriere
 Survey data in meters



Drafted by Connie LaPerriere ©1996
 Tongass Cave Project, NSS

GLACIER GROTTO MEMBERSHIP LIST

Please notify the Secretary of any errors in address or telephone numbers
and changes when they occur

<u>Name</u>	<u>Address</u>	<u>Pd</u>	<u>NSS#</u>	<u>Home Tel.</u>	<u>Work Tel</u>
Allred, Carlene B.	PO Box 376, Haines AK 99827	95	16389FE	Message=	(907)766-2020
Allred, Ella	PO Box 376, Haines AK 99827	95			
Allred, Flint	PO Box 376, Haines AK 99827	95			
Allred, Forest	PO Box 376, Haines AK 99827	95			
Allred, Kevin	PO Box 376, Haines, AK 99827	95	16730FE	Message=	(907)766-2020
Allred, Soren	PO Box 376, Haines AK 99827	95			
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Baichtal, J.B.	131 Lakeview Dr., Silver Lake, WA 98645	95		(206)274-6971	
Baichtal, James F.	Tongass Ranger Station, Thorne Bay AK 99919	97	33277RE		(907)826-3271
Blazer, Rexford S.	PO Box 22423, Juneau AK 99801	96	17207RE	(907)586-3986	(907)465-8791
Bowers, Wm. Harvey	305 S. Bartlett Cir, Wasilla AK 99654	96	12088RE	(907)376-2294	(907)376-2294
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Brewer, Karen	3927 Bryant Ridge Pl #1, Anchorage AK 99504	95		(907)337-7501	(907)562-2992
Bucove, Michael A.	PO Box 8782, Ketchikan AK 99901	95		(907)225-7023	(907)225-5141
Burger, Raymond A.	PO Box 672349, Chugiak AK 99567	96	30656RE	(907)688-3835	
Carlson, Kent R.	1155 King St, Christiansburg VA 24073	96	30124RE	(703)382-3523	(703)231-4825
Clark, Robert C.	338 Toledo Vader Rd, Toledo WA 98591-9710	96		(206)864-2055	
Eddy, Dave	PO Box 6217, Fort Hood TX 76544-6217	95N	11830RE	(817)699-6451	(817)287-9101
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Ferguson, James M.	PO Box 20908, Juneau AK 99802	96		(907)364-2171	
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Hall, Elisabeth S.	7040 Gibbs Hill Cir, Anchorage AK 99504	95	16557FR	(907)333-2090	
Hall, James Allen	7040 Gibbs Hill Cir, Anchorage AK 99504	95	29632FA	(907)333-2090	
Hall, Matthew Thomas	7040 Gibbs Hill Cir, Anchorage AK 99504	95	22131FA	(907)333-2090	
Hall, Michael Ian	7040 Gibbs Hill Cir, Anchorage AK 99504	95	24151FA	(907)333-2090	
Hall, Richard Allen	7040 Gibbs Hill Cir, Anchorage AK 99504	95	16556RE	(907)333-2090	(907)257-1377
Halliday, Dr. William R.	6530 Cornwall Ct, Nashville TN 37205	95N	812LHCF	(615)352-9204	(808)969-7980
Hallinan, Dr. Thomas J.	1617 Wolverine Ln, Fairbanks AK 99709-6628	96	06329RL	(907)479-6064	(907)474-7454
Hallinan, Nancy C	1617 Wolverine Ln, Fairbanks AK 99709-6628	96	6367FL	(907)479-6064	
Hallinan, Peter	1617 Wolverine Ln, Fairbanks AK 99709-6628	96		(907)479-6064	
Hampton, Don	PO Box 82950, Fairbanks AK 99708	95	27054RE	(907)474-3755	(907)474-7741
Hancock, Jeff	PO Box 1181, Dutch Harbor AK 99692	95	37086RE		(907)581-3366
Hanson, Douglas W. IV	2558 Beverly Hills Dr., Chamblee GA 30341-3852	95			
Harney, Deborah	5351 Shoreline Dr., Ketchikan AK 99901	95		(907)247-5351	
Harney, Elizabeth	5351 Shoreline Dr., Ketchikan AK 99901	95	34437RE	(907)247-5351	
Harney, Geoffrey	5351 Shoreline Dr., Ketchikan AK 99901	95		(907)247-5351	
Harney, Richard	5351 Shoreline Dr., Ketchikan AK 99901	95		(907)247-5351	
Harney, William	5351 Shoreline Dr., Ketchikan AK 99901	95		(907)247-5351	
Heaton, Dr. Timothy H.	414 East Clark, Vermillion SD 57069-2390	95	15753RE	(605)624-9179	(605)677-6122
Herd, Paul C.	22 Beach, Port Protection AK 99950	96		(907)463-3390	
Kemp, Molly	PO Box 571, Tenakee Springs AK 99841	96	38273FR	(907)736-2234	
Klinger, Col. David M.	PO Box 537, Leavenworth, WA 98826	96	10583RE	(509)548-5480	(509)548-5480
Knotts, Rob	PO Box 38, Prairie City OR 97869-0038	95	38660RE		
Kowalczyk, Mary	PO Box 9367, Ketchikan AK 99901	95	37166RE	(907)225-0131	(907)247-8574
Lane, Doranne M.	40 Hidden Brook Ln Signal Mt. TN 37377-2063	96N	17389RE	(615)886-6219	
Lane, Kelsey M.	40 Midden Brook Ln Signal Mt. TN 37377-2063	96N	35816	(615)886-6219	

<u>Name</u>	<u>Address</u>	<u>Pd</u>	<u>NSS#</u>	<u>Home Tel.</u>	<u>Work Tel</u>
Lane, Micha M.	40 Hidden Brook Ln Signal Mt. TN 37377-2063	96N	32392	(615)886-6219	
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LaPerriere, Zach	PO Box 9062, Ketchikan AK 99901-4062	96			
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Lord, Victoria A.	PO Box 7342, Ketchikan AK 99901	95			
Love, David	PO Box 210745, Auke Bay AK 99821	96	38145RE	(907)789-6603	(907)789-6000
Lyons, David R.	PO Box 296, Petersburg AK 99833	96		(907)772-3572	
Lyons, Deborah	PO Box 296, Petersburg AK 99833	96		(907)772-3572	
Mauser, Mike	PO Box 5730, Elko NV 89802-5730	95	11135RE		
Maves, Shelton	PO Box 117, Craig AK 99921	95	38608RE	(907)826-3052	
Morton, Bruce R., Jr.	HC83 Box206 EagleRivRd.Eagle River AK 99577	96	3202RL	(907)694-9112	(907)694-9112
Murray, Alan J.	312 Mission St, Ketchikan, AK 99901	96	37330RE	(907)225-7453	(907)225-2500
Myron, Rachel	202 Observatory St, Sitka AK 99835	96	40195RE	(907)747-7471	
Olmsted, Nick	PO Box 571, Tenakee Springs AK 99841	96	38272RE	(907)736-2234	
Olson, Dr. Wallace M.	PO Box 210961, Auke Bay AK 99821-0961	96		(907)789-3311	(907)789-4420
Olson, Marie M.	PO Box 210961, Auke Bay AK 99821-0961	96		(907)789-3311	
Pease, Chuck	PO Box 10130, Prescott AZ 86304-0730	96N	4847FL	(602)778-3351	
Perrigo, Dalene T.	1921 Congress Cir #B, Anchorage AK 99507	96	39613RE	(907)344-3290	(907)522-1096
Perrigo, Lyle D.	1921 Congress Cir #B, Anchorage AK 99507	96	39514FR	(907)344-3290	(907)522-1096
Rockwell, Dr. Julius, Jr	2944 Emory St, Anchorage, AK 99508-4466	96	11308RF	(907)277-7150	(907)277-7150
Rockwell, Elizabeth A.	2944 Emory St, Anchorage AK 99508-4466	96	15232FR	(907)277-7150	(907)277-7150
Ruggles, Anne K.	PO Box 82950, Fairbanks AK 99708-2950	95	27053FR	(907)474-3755	
Russell, Amy	PO Box 19106, Thorne Bay AK 99919	95		(907)828-3426	(907)828-3304
Sandhofer, Paul F.	PO Box 91333, Anchorage AK 99509	95	35960RE	(907)344-3259	
Sattler, Dr. Robert A.	PO Box 83115, Fairbanks AK 99708	95	27469RE		(907)474-7818
Sempert, Craig	PO Box 796, Craig AK 99921	95	36563RE		(907)826-3481
Serrill, Ward	PO Box 22112, Juneau AK 99802	95		(907)463-4291	(907)463-4291
Sindorf, John G.	PO Box 757, Palmer AK 99645	96	39773RE	(907)745-3451	(907)772-3333
Smith, Dr. G. Warren	12290 Northwood Dr,Hammond LA 70401-2518	96	5601RL	(504)549-3742	(504)549-2280
Smith, Deborah Clark-	3456 Arnold Ave., Ketchikan AK 99901	96		(907)247-3456	
Smith, Parker	3456 Arnold Ave., Ketchikan AK 99901	96		(907)247-3456	
Smith, Pete	PO Box WWP, Ketchikan AK 99950-0280	95	33979RE	(907)846-5223	(907)846-5223
Smith, Samantha	3456 Arnold Ave., Ketchikan, AK 99901	96		(907)247-3456	
Sonnenberg, Gary	1377 Pond Reef Rd, Ketchikan AK 99901	96	33648RE	(907)247-1559	(907)228-6323
Stenford, Ann Marie	PO Box 5084, Ketchikan AK 99901	95	38226	(907)225-8968	(907)225-2273
Stiteler, Mark D	3927 Bryant Ridge Pl #1, Anchorage AK 99504	95		(907)337-7501	(907)276-2400
Stratman, Joseph	General Delivery, Petersburg AK 99833	96		(907)772-4375	
Tierney, Patrick J.S.	PO Box 19484, Thorne Bay AK 99919	96	33898RE	(907)828-3992	(907)828-3304
Tierney, Ginny L.	PO Box 19484, Thorne Bay AK 99919	96	33899FR	(907)828-3992	
Tobias, Michelle	11604 Highview Ave, Silver Springs MD 20902	95	37846RE	(301)946-5331	
Tubbs, Chuck	1418 W Lexington Ave, Elkhart IN 46514-2046	96	25182RE	(219)522-5701	(219)294-3531
Tubbs, Nancy	1418 W Lexington Ave, Elkhart IN 46514-2046	96	32450FR	(219)522-5701	
Valentine, David B	11976 N Tongass, Ketchikan AK 99901	96		(907)225-2289	
Valentine, Rebecca A.	332 Upland Way, Ketchikan AK 99901	96			
Van Note, Michael	PO Box 26, Haines AK 99827	95	14174RE	Message =	(907)766-2020
Vann, Cynthia G.	PO Box 10130, Prescott AZ 86304-0730	95N	14713FL	(602)778-3351	
Vis, William B.	35 S. Main St. Apt. 2S Mullica Hill NJ 08062	96N	34340RE	(609)223-1607	
Warren, Aaron M.	298 Limestone Pl., Edna Bay AK 99917	96		(907)594-6335	
Warren, Christine E.	298 Limestone Pl., Edna Bay AK 99917	96		(907)594-6335	
Warren, Ginger M.	298 Limestone Pl., Edna Bay AK 99917	96		(907)594-6335	
Warren, Mariah L.	298 Limestone Pl., Edna Bay AK 99917	96		(907)594-6335	
Warren, Misty D.	298 Limestone Pl., Edna Bay AK 99917	96		(907)594-6335	
Warren, Stephen D.	298 Limestone Pl., Edna Bay, AK 99917	96		(907)594-6335	
Wood, Dr. William R.	665-10th Ave., #305, Fairbanks AK 99707	96		(907)452-6248	

<u>Name</u>	<u>Address</u>	<u>Pd</u>	<u>NSS#</u>	<u>Home Tel.</u>	<u>Work Tel</u>	<u>Ziel,</u>
Darcie	PO Box 44, Tenakee Springs AK 99841	95	38390AS	(907)736-2234	(907)474-666	
Zwick, Carmelita	615 Hill Rd, Ketchikan AK 99901	95		(907)225-5619		
Zwick, David	615 Hill Rd, Ketchikan AK 99901	95		(907)225-5619		

KEY: Pd = Year through which membership has been paid. PdN = member owes primary allegiance to another Grotto.)
 NSS # = NSS membership number; status with NSS is indicated by letters;
 i.e., no letters means NSS membership has lapsed.

SUMMARY: Total membership = 110; total NSS members = 63; NSS members with primary affiliation to Glacier Grotto = 43 as of December 31, 1995

GLACIER GROTTO 1995 BALANCE SHEET

Income:

A: 1994 Cash forward	294.30
B: 1995 Memberships, patches, cideos, and <u>Caver</u> back issues	1,494.33
C: Donations - Grotto and ACR Members (1/2 of this belongs to ACR)	856.00
D: 1996 Memberships	248.00
E: 1997 Memberships	15.00
Total Deposits	\$2907.63

Expenses:

A: New Account check supply	15.60
B: 1994 <u>Cavers</u> (14:4,5,6)	692.49
C: 1995 <u>Cavers</u> (15:1,2,3,4)	666.48
D: 1995 Service charges (total)	23.09
E: Conference Call	41.55
F: Transfer ACR money to ACR	428.00
Total Expenses	\$1867.21
1995 Cash Balance	\$1,040.42

Assets:

18 patches @\$5 each	90.00
18 videos @\$15 each	270.00
Total	\$360.00

Liabilities:

40 videos plus freight	\$420.00
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Note:

1994 ended with a budget balance (including liabilities) of -\$668.77. If we subtract 1996 memberships, 1997 memberships, Caver 15(5) and the estimated amount for Caver 15(6), and the amount owed for the videos, we will end up with 1995 balance (including liabilities) of \$35.87.

That is a huge improvement!

Alan Murray, Treasurer

Video: Caves of Southeast Alaska - \$15 plus \$2 for shipping. **Patches:** Glacier Grotto - \$5. Send check to
 Marcel LaPerriere
 PO Box 9062
 Ketchikan AK 99901

The Alaskan Caver

1921 Congress Circle, Apt. B
 Anchorage, AK 99507



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