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**Calendar of Events**

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<th>date(s)</th>
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<tr>
<td>Tue-Sun May 26-31 (week)</td>
<td>backpack to Limestone Hills</td>
<td>Talkeetna Mountains</td>
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<td>Wed May 27</td>
<td>7:30pm</td>
<td>SouthCentral Grotto Meeting</td>
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<tr>
<td>Wed Jun 24</td>
<td>7:30pm</td>
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<td>(month) Jul 1-31 month</td>
<td>(POWIE VI)--Tongass Cave Proj</td>
<td>Southeast Alaska</td>
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<tr>
<td>Mon-Fri Aug 3-7 week</td>
<td>1992 NSS Convention</td>
<td>Salem, Indiana</td>
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**Tongass Cave Project (POWIE VI and DIE II)**

**July 1 through July 31, 1992**

**General Information**

**PURPOSE** The Tongass Cave Project is a project of the NSS. Its purpose is the discovery, exploration, survey, conservation and study of karst and caves in Southeast Alaska. In pursuance of a cooperative agreement with the U.S. Forest Service, we will be working together with them. Since one of our objectives is conservation, our policy is not to share information or location of caves to the public which may be detrimental to the resources contained therein. This year there will be two Project expeditions: into Prince of Wales Island (POWIE VI) and Dall Island (DIE II). Cave conditions are often cold, wet, and vertical. DIE II will be mostly on remote, fly-in alpine areas with possible strandings of a week or more because of stormy weather conditions, so these participants should not have stringent schedules, and must be very experienced vertically. There are presently no fees for joining the Project, but contributions are welcome to help with mailing, survey paper, and Project rope.

**PERSONNEL** Almost all the caves investigated thus far require at least some vertical skill, and participants should be in good condition and able to cope with thick brush, very rugged terrains and basically an environment many are not familiar with. For the more extreme vertical systems, top rate SRT gear is a must, and one needs to be in practice. We have need of experts in various specialized fields.

**TRANSPORTATION AND FACILITIES** When joining either expedition to help the Forest Service inventory caves, you need to get yourself to Prince of Wales Island, and from there the Forest Service or those with cars can get you out to the base camps and caving areas. On the POWIE expedition, there are either flights or ferries to Ketchikan, ferries to Hollis, and driving 100 miles on logging roads to base camp at El Cap (it is possible to charter a plane from Ketchikan to El Cap). A specific rendezvous for DIE II is forthcoming. For ferry reservations call (800) 423-0568. Vehicles must have reservations months in advance, but walk-ons need none. Write for a "Prince of Wales Island Road Guide" ($3.00) from: Forest Supervisor, Tongass National Forest, USFS, Federal Bldg, Ketchikan, AK 99901. If on foot at Hollis, you can be picked up if prior arrangements are made. Contact can be made with the Project by writing: Kevin Allred, Box 376, Haines, AK 99827 before mid June, or (on Prince of Wales): Pete Smith, WWP, Ketchikan, AK 99950 during July. Letters can reach you on POWIE by addressing "in care of" Pete Smith. Once at base camp on a Forest Service related expedition, "subsistence" food (this means whatever grocery store foods we order) is provided by the Forest Service, so you need to notify us early of your tastes. Lodging is provided by the Forest Service, but children are not allowed to stay in the Forest Service work camps, so families need to
camp out in our own tents nearby. See other sheets for more details on Forest Service support and our obligations in return. For those who wish to be independent of any obligations with the Forest Service, many remote and totally unexplored limestone areas remain in Southeast. Such trips require more individual planning, work, and travel challenges. Contact principal members of the Project for leads; the Project would hope to have copies of resultant data from such trips.

SAFETY In the past, most of our injuries have occurred outside the caves on rugged terrain. A large contributor to these injuries is a combination of exhaustion and heavy packs. We need to travel in teams whenever possible. Each team needs to sign out where they are going, their objectives, time they left, and time of expected return. Again, it is very important that one be in good shape and in practice vertically. We cannot count on having someone else responsible for rescue or patching us back together. Since most caves are virgin when entered, there may be loose rock to stabilize. Some caves are very prone to flooding, so be aware. Survey as you explore, and make bomb-proof anchors. Ropes are provided. First aid and outdoor survival skills are helpful.

Minimum Equipment for Easy Caves
1. Coveralls, if possible.
2. Two or more layers wool or other insulating clothing, balaclava.
3. Standard caving gear (carbide and AA and D batteries are provided).
4. Large backpack.
5. Survey gear, if you have it; tape should be in feet and tenths.
7. Rain gear including rain pants.
8. Rubber boots (nice but optional).

Minimum Equipment for Difficult Caves
1. Drysuit or wetsuit.
2. Waterproof nylon coveralls.
3. Two or more layers insulating clothing (polypropylene/pile/balaclava).
4. Standard caving gear, incl. several waterproof light sources (carbide, AA and D batteries are provided).
5. Large backpack.
6. Survey gear, if you have it; tape should be in feet and tenths.
7. Top quality vertical gear.
8. Waterproof tent/tarp; backpacking gear if go to remote/alpine areas.
9. Heavy duty rain gear incl. pants.
10. Rubber boots (nice but optional; EXTRA-TUF brand recommended, can be purchased in Ketchikan for $80).

Rivers End Cave
Trip Report
Prince of Wales Island
by Pete Smith

Recently moving to the heart of virgin cave country here in Whale Pass, Prince of Wales Island, and having an interest in delving underground from way back was reason aplenty for me to join forces with the 1991 POWIE team.

One of the first caves I got involved working on was the survey of Rivers End Cave, discovered by USFS geologist Jim Beichtal on a routine commute to work by helicopter. A surface stream was seen to run into a vertical wall and dive under it with a large, 40-foot-diameter pit nearby. Upon closer examination on foot, Jim was also fortunate to discover O.S. Pit. With a quick exclamation followed by a tuck and roll, he managed to barely avoid dropping this 72-foot pit without a rope.

On July 16, Doug Strait and I decided to work together and map this system. We drove from the camp at El Cap and, with a walk of about 1/4 mile through beautiful old growth forest, we found the
entrance. While Doug was sketching the area, I wandered around and found several old blazed trees, probably from a trap line more than 30 years ago.

We moved over to what looked to be the stream’s high water overflow. Down a ten-foot drop and we were in the cave. I was leading and giving Doug back sights with the instruments while he recorded and sketched. It did not take long before we got into a clean, tight crawlway. We passed a fork, leaving the right branch to be surveyed later, and soon got into stand-up room. This was quite a relief after being scrunched into strange and unusual shapes taking sights along such a tight passage.

We came to the edge of a drop-off like an angled pit, about 15 feet around, steep enough to rig our 100-foot rope. After descending 60 feet, the walls closed in again and started dripping on us. Foam specks all around showed us that the area had been sumped not long before. I pushed my way under a low ceiling with water up to my chest, to find that the lead rose again but pinched out. It was time to call it a day and get warmed up. Total feet surveyed, 305.8.

A bright and early start the next day saw us back where the crawlway opened up into the angled pit. Looking up the day before, I had seen a possible lead up high and thought I might be able to get to it. Sure enough! After a moderately difficult climb, I called to Doug, "It goes!". The lead was more tight crawlway, and to make it more interesting, there were a few small formations among the silt and mud.

Sitting down and munching on some lunch a bit farther on, waiting for Doug to get caught up on his notes, I turned off my headlamp and was surprised to see light ahead. A fissure ten inches wide ran straight out to devil’s club and daylight. From there, there was a short drop down into a room with the roar of water. We had come to the other side of the wall that the surface stream ran into! Here communication was difficult at best; yelling into the other guy’s ear was the norm. To make it worse, we had a wide passage with large breakdown and a gradually lowering ceiling, so several long shots were possible. Much running back and forth was required to transfer all the instrument readings to the notebook.

A walking passage above a ten-foot overhanging climb beckoned. We managed to get ourselves up that and into a beautifully scalloped winding walkway. This clean scallop walk sumped after about 80 feet; so, back we went to the main route. Almost immediately, we were on hands and knees in the creek bed with a low ceiling, but up ahead... light!

We had arrived at the bottom of a pit measuring about 80 feet by 60 feet at the bottom, stretching way up to the trees above. We brought our survey point to a good place to tie in from the surface and decided to do that tomorrow. A total of 386.5 feet surveyed this day.

On the morning of the 18th, we appeared at the lip of Yukon Pit with a 200-foot rope. This being my first major pit, I was somewhat apprehensive. It went smoothly with Doug to coach me, he being a pit man from way back. It didn’t take long to finish surveying the bottom of the pit, as it sumped quickly. I found one interesting muddy chimney lead to climb. It went about 60 feet before becoming too tight.

Attempting to climb out of the pit on the rope, I couldn’t get my borrowed vertical gear to work right. I figured that I would do better to crawl out the way we had come in the previous day and pull a rope that was still rigged. So I did that, but when I got to the entrance crawl tube, I was mighty surprised to find it half flooded after a day of hard rain. I got wet getting out and learned a good lesson: Watch the weather while caving in Southeast! Surveyed 235.2 feet.

I was off in some other cave a few days later, but Doug and a couple other expedition members returned to Rivers End Cave to push the right-hand lead of the entrance tube. They got a hundred feet of passage before finding the way blocked by a log. Maybe next year’s expedition will want to come in with a handsaw to open it up.

BEARS PLUNGE
PRINCE OF WALES ISLAND
ALASKA

TOTAL DEPTH-147 ft.
TOTAL LENGTH-1864 ft.
TONGASS CAVES PROJECT

PROFILE

LEGEND
- stream
- slope
- drop
- breakdown
- cobbles
- mud or silt
- pool
- drop depth or chimney height (feet)

note: excellent lead 60 ft. above floor of pit not shown

Map by Kevin and Carlene Allred

©1991 by Kevin Allred
Description and Speleogenesis

First discovered by Jim Baichtal, Bears Plunge was dropped and surveyed August 14, 1991 by Susan DeLisa, Doug Strait, and Jim Baichtal. The cave is formed in Heceta Limestone. The 142 freefall pit is partially obscured by vegetation in a small steep sided sinkhole. A small streamlet flows into it from the south after seeping from an adjacent muskeg. Two more small shallow sinks are in line adjacent to the north. It is likely that, as is common in many other cave systems encountered on the Island, the muskeg plays a large part in the formation of the cave by: 1) providing highly acidic waters from rotting vegetation of the muskeg, 2) acting as a giant spongy reservoir to provide a constant though fluctuating supply of corrosive waters, and 3) acting as a "cistern" collector without the otherwise above ground water absorbing foliage which loses much water through evaporation. It is not yet known if the waters from muskegs are actually more corrosive than soils on well drained karst, so on this point we can only speculate. An additional larger stream pours into the shaft 30 feet above the floor providing an even greater potential for corrosion. It is likely that this pit was debris filled at least partially by glacial action and is now in the slow process of flushing out. On the rocky floor of "Singing Woman Room" was a partially decomposed bear skeleton. Although there is a short loop present, the cave soon ends in a sump. Total surveyed passage is 186.4 feet and total surveyed depth is 147 feet.

Leads

Two good leads exist at the 30 foot waterfall and 60 feet off the floor. Aid techniques would be required to reach both.

Protection

Due to its scenic nature and close proximity to road #20, this cave should be protected for its recreational values. It should be included in a common buffer with nearby Slide Cave and other caves which may also be present. Its location should not be shared with the general public because of its vertical nature.

Rivers End Cave

O.S. Pit

Prince of Wales Island
Preliminary Report #45
by Kevin Allred and Doug Strait
October 30, 1991

Introduction

Situated closely together in Heceta Limestone, these two caves are located on one of the few remaining level, unlogged karst terrains remaining on Prince of Wales Island. Although definitely not a prime example of very well drained karst landscape because of its spotty muskegs and average sized timber, it is still important for its speleological features.
Rivers End System

Rivers End Cave consists mostly of small diameter phreatic tubes. Two major creeks pouring off poorly drained soils from the north and east were responsible for the formation of the cave. The waters are now being swallowed progressively further up the creek beds. Presently the creeks are captured in two separate sinks which both pool up in extra high flows. The nearby Yukon Pit entrance is an old abandoned sump from the eastern drainage. Jim Baichtal first discovered this 150 foot deep and 20 foot diameter entrance by helicopter in the spring of 1991. Yukon Pit now normally swallows only local adjacent runoff, and is part of the Rivers End cave system. A minimum 170 feet of rope is required to rig the drop. The second entrance to Rivers End is located in the wall of the large insurgence sink located 160 feet north of Yukon Pit. The associated surface stream sinks in at least four locations within the sink, none of which are enterable. From within the cave, water has been noted entering the passage in five locations. There is some doubt that all of the water seen sinking in the entrance sink is accounted for by the water observed in the cave. It is not known if any or part of the water from the other insurgence sink above Yukon Pit enters any part of the accessible cave system, but it almost certainly does so eventually.

It is suspected but not yet proven that all the waters resurge from Cataract Cave over one half of a mile and 200 vertical feet away. Yet inconclusive dye trace investigations were carried out this year by Winfield Wright. Waters in the cave do not combine into a single stream, but instead sink/sump in two separate locations. In the walls of the insurgence entrance sink are one confirmed and another probable impassable entrances. The confirmed impassable entrance is a ten inch wide, ten foot high and 50 feet long fissure through which daylight has been seen. The probable impassable entrance is a "too tight" hole from which the sound of cascading water is heard. There is a 25 foot climb (50 foot handline recommended) between the insurgence entrance and Yukon Pit (see map). The cave has a few minor partially redissolved speleothems. All practical passages have been explored except a 20 foot pit at the end of "Flush Tube". The top of the pit is currently blocked by a log. Once the log rots away, washes in, or is otherwise removed, further exploration may be possible. No significant biology was noticed during explorations except for some surface beetles.

O.S. Pit

O.S. Pit was discovered in the summer of 1991 by Jim Baichtal, who almost stepped into it while investigating cave resources in the area. It is located in line with a south trending main passage of Rivers End Cave, and only 80 feet south of Yukon Pit. This cave consists of a blind 72 foot deep shaft. The floor of the shaft is six feet by eight feet and the cross section fairly uniform at these dimensions for most of its depth.

Management Recommendations

The large stream entering Rivers End makes the cave susceptible to plugging from an increase in debris being washed in. Measures should be taken to avoid any introduction of debris from logging or road building in both drainages. The cave is prone to flooding, and there is at least one low spot in a passage between the insurgence entrance and "Flush Tube" which could fill up and trap cavers in wet weather. The vertical components of the cave should only be attempted by those experienced in vertical skills; location, for this reason, should not be shared with the general public. O.S. Pit, although not as significant or prone to damage from flood debris, should be protected with Rivers End and surrounding caves as a study area. Other nearby caves so far discovered are Panic Pit (#47) and Nervous Rock Pit (#46).
Nervous Rock Pit
Prince of Wales Island
Preliminary Report 
by Kevin Allred and Doug Strait
October 31, 1991

Description
Discovered in the fall of 1991 by Jim Baichtal and Kevin Allred, Nervous Rock Pit is located some 300 feet west of Yukon Pit. Surrounded by numerous other minor sinks, it is a 30 foot deep pit just off the bottom of a steep sided 20 foot sink. A few feet from the bottom of the pit, the passage becomes too tight.

Management Recommendations
Singly, this pit has little significance, but as it is probably hydrologically related with Rivers End Cave, it would be protected from road building and logging impacts with the other nearby caves (see reports #45 and #47).

NERVOUS ROCK PIT
PRINCE OF WALES ISLAND
ALASKA
TONGASE CAVES PROJECT

Sketch by Pete Smith and Doug Strait
July 30, 1991
sketch by C. R. Allred
Description

Located about 600 feet south of Yukon Pit, Panic Pit was discovered August 12, 1991 by Jim Baichtal and Kevin Allred. One side of a 30 foot deep sinkhole can be descended to a steep crawlway and narrow fissure constriction at the top of a 25 foot belled-out drop. A small streamlet flows down into the system from a small muskeg. Total surveyed passage is 67.2 feet.

Safety Recommendations

A rope at least 70 feet long for the last 25 foot drop should be rigged on a tree above the sink. Only thin people should attempt the pit or panic may result. The tight constriction at the top of the drop is very awkward.

Management Recommendations

Singly, this cave is not too significant, but with the nearby caves (see reports #45 and #46) should be protected from logging and road building impacts and preserved as is with surrounding terrain as a study area. Other undiscovered caves may be in the area.
Description

Bear's Bed Cave was discovered by Jim Baichtal and is located in Heceta Limestone in a rather poorly drained karsted region containing muskegs. It is significant geologically for the glacial striations noted on a piece of conglomerate breakdown in the entrance portion. It would be interesting to study this and other caves for more evidence of glacial filling further in the depths. Total survey to the diggable constriction at the end is only 30 feet.

Management Recommendations

Since the cave is geologically important, it should be protected from logging and road building impacts. There is no reason to restrict the entrance location from the general public.

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**BEAR'S BED CAVE**

**PRINCE OF WALES ISLAND**

**ALASKA**

Total length 30 ft.
Total depth 15 ft.

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**PLAN VIEW**

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**PROFILE**

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Suunto and tape survey by
Fred Chitty, Kevin Allred and Jim Baichtal
July 1991

©1991 by Kevin Allred
Description

Root Source Cave was discovered by Jim Baichtal in the spring of 1991. Although only surveyed to 168.7 feet, the cave contains interesting features: 1) almost exclusively noncarbonate rocks in the form of conglomerate clasts, stream cobbles and other angular rocks on the floor, 2) some decent speleothems, and 3) a hydrological connection with a second sinkhole and solution channel. The cave is very horizontal and practical exploration ends at a very muddy, tight belly crawl which fills with water judging from foam lines on walls there.

Management Recommendations

Because of its delicate speleothems (both stalactites and soda straws), the location of this cave should be restricted from the general public. The cave should be protected from road building and logging activities.

Suunto's and tape survey by K. Allred, F. Grady, J. Baichtal

Suunto's and tape survey by K. Allred, F. Grady, J. Baichtal

Suunto's and tape survey by K. Allred, F. Grady, J. Baichtal

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Suunto's and tape survey by K. Allred, F. Grady, J. Baichtal

Suunto's and tape survey by K. Allred, F. Grady, J. Baichtal
Bear Pit
Prince of Wales Island
Preliminary Report #53
by Kevin Allred
November 4, 1991

Description

Discovered still containing snow in spring (1991) by Rich Reeves, Bear Pit is located in a no-cut buffer, other large but plugged insurgence sinks lie north and northwest 150 to 250 feet. It begins as a 35 foot drop to a rubble plugged, short crawlway; a small streamlet enters.

Management Recommendations

Bear Pit should have continued protection from logging and road building impacts. It may be a valuable paleontological site due to trapped animals. It would be wise to restrict its location from the general public because of its vertical nature.

Conflict Cave
Prince of Wales Island
Preliminary Report #54
by Kevin Allred
November 4, 1991

Description

Conflict Cave is located in a dry, but often swampy gully strung with shallow sinks. Up gradient, the gully extends past Arm Pit and to a muskeg. Beyond the muskeg is the Rivers End cave system. After some debate as to how best protect the karst features, it was decided to buffer the gully off as a select cut zone within the harvest unit. The smaller trees (less than 16 inches) will be left standing and the larger ones cut and lifted out of the gully. We feared that if the larger trees were left exposed in a narrow buffer, they would blow over and create more impact than if they were taken carefully. The northernmost portion of the gully is a flagged buffer surrounding a large sink which receives three streams. Eight large trees will be taken leaving about twelve smaller ones. The next flagged buffer south contains a smaller sink and six trees will be taken with six left. Further south, the buffer corridor is approximately 150 feet across and extends down the gully at least 400 feet. Approximately 70 trees will be taken. Conflict Cave is located within this long corridor. Conflict is entered at the base of a ledge next to a small pool in the above mentioned gully. The 20 foot entrance drop requires a rope which, if long enough, can be used for the remaining drops (15 and 20 feet). A few tight leads remain in conflict Cave, the paramount one being a two by three foot crawlway continuing from the bottom. This crawlway swallows the streamlet which appears partway down the cave. Wetsuits or drysuits would be useful in exploring further.

Management Recommendations

This cave and area should be checked from time to time and monitored for logging impacts. It is not known what the impacts of logging the immediate area will be. Further documentation of any biology and subsequent inspection would help us all understand more of the dynamics of logging over caves. Its location should be withheld from the general public because of its vertical and wet nature.
CONFLICT CAVE
PRINCE OF WALES ISLAND, ALASKA
TONGASS CAVES PROJECT
Surveyed length: 118.3 feet
Surveyed depth: 62.3 feet

Simplified Profile
2 by 2 foot lead continues
high lead, inaccessable

Entrance
muskeg

2 by 2 foot lead continues
high lead, inaccessable

3 by 2 foot lead goes
tight chimney lead, difficult

Survey by Bob Christensen and Pete Smith, July 27, 1991
TONGASS CAVES PROJECT

KEY
- mud or silt
- stream
- slope
- vertical drop

too tight - tight chimney lead, difficult

by B. Christensen, G. Coville, C. Metzler and P. Smith,
May 1992 Volume 12 Number 1 The Alaskan Caver page 15
ARM PIT
PRINCE OF WALES ISLAND
ALASKA
Surveyed Length: 257’ feet
Total Depth: 117’
Tongass Caves Project

PLAN

- Stream comes from 5 foot below surface zero datum
- Fissures too tight
- Small drain goes 20 feet, pinches in breakdown
- Tight squeeze, 2 second pit
- Chimney 50 feet?
- Too slippery to climb
- Too tight below Main Drain

PROFILE

- 117.0

Map drafted by Kevin and Carline Alfred.
Description

Arm Pit was discovered by Rich Reeves while laying out the boundary for a timber harvest unit. He moved the boundary to exclude the pit from the unit. Located in Heceta Limestone, Arm Pit has a spectacular vertical 60 foot entrance drop which swallows a small streamlet coming from five feet below the north lip. Below the drop, the rocky floored passage takes the water in a southern direction. Breakdown and rocky debris fills the passage entirely in several places, but the way is clear on both sides of these debris piles. The cave ends after 160 feet at a pit in the floor which swallows much of the stream. It was too tight to penetrate very far. Another 20 foot deep pit in a large room on the east side of the debris piles is clogged with breakdown. An unexplored tight squeeze in the floor.

30 feet away yields two second rock soundings. At least three high leads exist in Arm Pit; all apparently too difficult to free climb into. It is not known if this system connects hydrologically with Cataract Cave 1/3 mile to the west.

Management Recommendations

Because of the vertical nature of this cave, its location should be restricted from the general public. Care should be taken in logging activities so as not to disturb the immediate entrance area. Fortunately, the entrance does not have steep slopes as many others do. If done carefully, trees can be felled away from the entrance to eliminate influxes of slash into the pit. The cave should be monitored with nearby Conflict Cave to further understand logging impacts on karst.

Cave Rescue

by Gene Kyle

This brief article is to acquaint you with me and for the Grotto to determine how much interest exists for cave rescue. I have been caving for the past six years in Idaho, Oregon, Washington, Utah, and New Mexico. I was an EMT for six years in Arizona, and a First Responder in Idaho. I am currently enrolled in the Winter Emergency Care and Wilderness First Responder course. I work for the Soil Conservation Service in snow hydrology. I moved to Alaska in December 1991.

[I have prepared] a two-page questionnaire I would like for all SERIOUS participants to fill out and return to me. This will be distributed to State authorities and to the Cave Rescue Section of the NSS to be used as a call-out list in the event of a rescue. Please address any concerns, questions, ideas or what-not on rescue to me. I will be passing on information from the NSS Cave Rescue Section through this newsletter.

[Editor's Note: Gene Kyle may be reached by phoning 248-3297 (home) or 271-2424 (work) or by mailing correspondence to:

Gene Kyle, Cave Rescue
7020 Tall Spruce Drive
Anchorage, AK 99502

Forms may be obtained from Gene Kyle, Curvin Metzler, or Jay Rockwell, or at any SouthCentral Area Grotto Meeting.]
Description

A most interesting cave lies in an insurgence sink and swallows a small stream. Access into the impressive entrance is down slick, mossy bedrock of the stream bed. The cave is a foot shaped affair with the foot following a faulted zone. The stream sinks in the sediment of the often pooled end. A short side passage, probably a fossil intake of the present stream, takes to the northeast.

Management Recommendations

Although Slide Cave is, in many respects, similar to many other caves situated below acid rich muskegs, it differs from other sinks with its bedrock creek bed and the possible fossil intake passage. The cave should be protected and studied for its geologic significance. Its location should be restricted from the general public because of its proximity to potentially dangerous Bears Plunge.

SLIDE CAVE
PRINCE OF WALES ISLAND
ALASKA
Surveyed Length: 102.2 feet
Depth: 45.2 feet
Tongass Caves Project

Compass, clinometer and tape survey August 12, 1991 by J. Baichtal and K. Allred.
Map drafted by Kevin and Carlene Allred.
Cataract Cave
Prince of Wales Island
Preliminary Report #67
by Kevin Allred
November 6, 1991

Description

The entrance to Cataract Cave is located in Heceta Limestone in the side of a heavily timbered hillside on the east side of El Capitan Passage. In the spring of 1991, Forest Service surveyors discovered one of the entrances on part of a land parcel planned for private ownership. The portion containing the cave has since been retained by the Forest Service. Down the hill, an old log cabin ruin could have once belonged to a trapper, judging from evidence in the area. A stream rushes from the entrance (flow estimated by Winfield Wright to be 630 gallons per minute at 8.5 degrees Celsius). The cave consists of two segments described as follows:

Lower Segment

The lower segment has three entrances. The northern walk-in one is dry and well hidden in a cleft formed by the waters issuing from the cave in the past. The other two are in the present water emergence route. The upper of these two entrances was formed by detachment of a large block of the cliff above the emergence entrance. A large creek thought to originate largely from Rivers End Cave exits from this portal. Redissolved moonmilk in the cave and regularly washed ledges just outside the entrance lend witness to awesome flooding at times; the violent flow must reach a cross section of at least eight feet in diameter. Dye was dumped at Rivers End this summer and traps set in the emergence, but Winfield Wright has not yet announced results.

By following the stream (during reasonable flows) into the emergence, one passes under the second "wet entrance" and then into the lower cave segment. Here, tightly spaced scallops high on the walls of the spacious canyon-like passage attest to fast flows. Many places in the stream passage are sparsely decorated with moonmilk, soda straws, and stalactites. There are some prime examples of breccia further on before a deep sump which marks the furthest traversable point without diving. Probing of the sump failed to reveal any air pockets within reach. A short tube loop is at the sump. Two side passages connect from the stream passage to the dry entrance. The innermost one leads over easily damaged moonmilk flowstone to a pristine moonmilk covered tube and pools. The sides and floor of these pools are covered with fibrous white spherical growths resembling cotton balls. They appear to be some form of subaqueous moonmilk growths and are a unique formation to all cavers who have so far seen them. Once depressed, these growths spring back to original shape. This passage should be left unentered as it connects to the "Turkey Room" which is easily accessible from the other end via the dry entrance.

The other side passage at the stream is not negotiable from that direction without the use of a short handline anchored from the other side to swing over a perched plunge pool. From the spacious corridor between the "Turkey Room" and dry entrance is another side passage accessible by a ten foot climb. Unidentified spiders were collected here. Tree roots have penetrated the roof at the end of this side passage which also contains some speleothems.

Upper Segment

Near some minor sinks and 150 feet above the lower entrances of Cataract Cave is a karst window. Easily located from the thunder of water inside, this is the entrance to the upper segment.
The 40 foot drop is negotiable with a 70 foot handline. Care must be taken here as the rushing stream plummets down an adjacent drop of some 50 feet to unexplored passage below, and the other side of the sump of the lower segment. In only 100 feet upstream, the main passage ends in a sump of unknown nature. However, ten feet above the sump is a muddy fossil crawlway. The reverberation of thundering water vibrates one's whole body in this crawl. Some helicitites and numerous delicate soda straws up to two feet long hang from the low ceiling. Many of these have been broken naturally, perhaps from the walls vibrating, and now lie in haphazard confusion on the muddy floor. Exploration and survey stopped at a very tight, muddy and wet belly crawl taking in an air flow.

Management Recommendations

T-Shirt Design Contest

At the last Grotto Meeting it was decided that we pursue the making of Glacier Grotto t-shirts. But first we need a design! So we decided to have a contest for the best design, with a free t-shirt to the winner of the contest. If you have any ideas for designs, draw them up and enter them in the contest.

Costs to Prince of Wales

Currently, in-state airfares are so low that it is actually cheaper to fly from Anchorage to POWIE VI than to take the ferry! The total cost to fly (round trip ticket Anchorage-Ketchikan is $175, Ketchikan-Hollis ferry is $12 each way) is $199. The cost for taking the ferry (after driving the 780 miles to Haines!) is $172 round trip Haines-Hollis. These figures do not reflect the cost in time when taking the ferry instead of flying.

The most important resource in Cataract Cave is the bizarre "cotton ball" growths in the fossil passage pools. These should be studied. Along with the other many speleothems such as "The Turkey Head" (a group of stalactites) the cave is one of the most beautiful in the state. It should be protected from over-visitation, especially in "The Turkey Room" and the mud crawl of the upper section. The cotton ball pools should not be entered or disturbed in any way. The entrance location should be restricted, even to recreational cavers. It should be pointed out that with continued logging in the recharge area will come probable increases in floods through the cavern, threatening serious degradation to the fragile speleothems. This is strong reason to not log anywhere around the Rivers End Cave drainages. Further dye trace studies should be promoted.

Invitation to POWIE VI

The Tongass Cave Project (TCP) is having two expeditions, both being held July 1 through July 31, 1992. POWIE VI will be based at El Cap as usual and DIE II will be on Dall Island in alpine karst. The Forest Service will be providing support to both expeditions. Dr. Timothy Heaton and Fred Grady will be organizing a paleo dig on POWIE and we expect to spend a week on alpine there in addition to surveying and exploring numerous new caves. Those interested in participating should contact me as soon as possible at Box 376, Haines, AK 99827.

--Kevin Allred

Alaskan Cave Protection Act

A Cave Protection Act (House Bill #576) was introduced on April 8, 1992. Grotto members are strongly encouraged to review and make comments on the bill.
SouthCentral Alaska Area Meeting
at 7:30pm on Wednesday, May 27
and again on Wednesday, June 24
in the offices of Stewart Title
Suite 110 of Calais I (3201 "C" St)

The SouthCentral Area Meetings will be
held at 7:30pm on the **fourth Wednesday**
of each month, as voted by survey last
year. Recently, it was decided that the
officers meet for discussion half an hour
before each meeting. After the program
is over, discussions continue nearby at
**The Eatery** (201 East Northern Lights).

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**CALVIN and HOBBES**

Bill Watterson

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**Glacier Grotto**

2944 Emory Street

Anchorage, Alaska 99508-4466

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Address Correction Requested