June 1998

Alaskan Caver, Volume 18, No. 3, June 1998

Dalene T. Perrigo

The Alaskan Caver

Volume 18 Number 3 June 1998

The Alaskan Caver

published by the

Glacier Grotto©

1921 Congress Circle, Apt. B, Anchorage AK 99507

Dalene T. Perrigo - Editor

Volume 18 Number 3 June 1998

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Cover Photo : Margaret Drummonds is suspended in Hanging Devil Fish of Doom Cave in 1997.

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 $2.50 each.

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 Bob Hicks for details. (907)248-2830.
- Ketchikan Meetings: 7 p.m. the first Monday of the month at the Alaska Public Health Service Building, 3054 Fifth Ave., Ketchikan.
- Fairbanks Meetings:

GG JOURNAL of the GLACIER GROTTO
The ALASKAN CAVER
June 1998

Sergey Levachev climbs over the ice in a Heceta Island alpine cave. Photo: Doug Feakes

CALENDAR

Oct 3-5.....Nittany Grotto 50th Anniversary - held in conjunction with the fall MAR Meet in Pennsylvania. Http://come.to/nittany.grotto

Oct 9-11.....Western Regional '98 at Camp Marston, Julian CA. Hosted by San Diego Grotto. Carl Diaz (619)561-3815.

July 12-16, 1999.....NSS Convention. Twin Falls County Fairgrounds, Filer Idaho. E-mail drdave@micron.net

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 Kave Sports, Ketchikan. Frequent rope practice sessions. Sonnenberg 247-1559

Southcentral Area meetings: Call Jay Rockwell at 277-7150 .

LETTER RE: CONTROL LAKE DEIS PUBLIC COMMENTS

Dear Forest Supervisor Brad Powell;

I am a retired R-10 civil engineer/logging engineer. My career included 19 years service on the Tongass National Forest. When I first arrived in 1965 at Ketchikan, the original log stringer bridge across Thorne River had just been completed and the sub-grade shovel was near what is now called Goose Creek, working toward Control Lake. I helped build the Control Lake panabode. Until the time I was transferred to Sitka in 1973 I was involved in the original location, survey, design and construction of the logging road (main haul) between Rio Beaver Creek and Sarkar Lake, the Big Salt Road between Control Lake and Klawock, the Hydaburg Road between Harris River and Hydaburg and the road connection to Coffman Cove from its intersection with the Thorne Bay Road near Naukati Lake. Having established now my intimate on-the-ground knowledge of the area, I submit the following comments for the record on the Control Lake DEIS.

When I first set foot on Prince of Wales in 1965, it was for all practical purposes an unbroken pristine jungle. Seemingly endless stands of timber as much as 80,000 mbf per acre covered Prince of Wales. "Full-bore" and uncontrolled logging under the 50 year "give away" contract was only about 6 years underway. I witnesses the then common practice of yarding five (5) to seven (7) foot diameter logs down salmon streams while at the same time salmon were attempting to spawn. I witnessed at the same time gravel being dredged from the stream beds for road building. The running water served to wash out the fines, producing good road construction rock which was much cheaper than blasting a quarry pit. One example is Fubar Creek within the Harris River drainage which is now on the Environmental Protection Agency 303d List of Alaska's impaired waterbodies some 38 years after the atrocity was committed. There are many others throughout the Tongass that should be on the 303d list such as Katlian River and Nakwasina River and Rodman Creek near Sitka but which have been "cov-

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PRESIDENT'S CORNER

by Alan Murray

The summer expedition on Kosciusko Island is in full swing, but not everything that is "happening" is limited to just that one place and time.

Before the expedition started, the Forest Service and Tongass Cave Project put a lot of work into completing the new Challenge Cost Share Agreement.

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KARST AND CAVES: Q & A

by Steve Lewis

Q1: What is karst?

A: Karst is a terrain with distinctive hydrology and landforms. It occurs on water-soluble bedrock such as limestone, dolomite, or gypsum. It is characterized by underground water drainage, sinkholes, pits, and caves.

Q2: How are caves and karst formed?

A: Caves which develop in limestone and other carbonate rocks are formed by dissolution of the bedrock by water. Slightly acidic water dissolves the rock, and, over time, forms passages negotiable by humans. Some idea of the process can be gained by thinking of the effect of water dripping onto a large block of sugar. Over 90% of caves have no entrance accessible to humans. Thus, the absence of humanly accessible caves does not imply the absence of karst or sensitive caves in an area. Caves may have multiple levels with ancient fossil passage high above the active water-filled passages below. Intermediate levels may be filled with water at peak flows, sometimes with dramatic changes in where the water goes. Surface topography is not a good indicator of subsurface drainage patterns that often flow under mountains and valley floors and emerge into entirely different surface drainage basins. Not all caves are formed in soluble materials. Lava tubes are formed when liquid lava drains out of a cooling matrix, leaving hollow tubes. Other types of caves include those formed in glacier ice and in talus.

Q3: What happens to water on well-developed karst?

A: Well-developed karst is characterized by underground water flow. Surface water quickly flows into pores in the bedrock and forms underground streams and rivers, which emerge again as springs.

Q4: Where and how extensive is karst in the world?

A: Carbonate rock is located throughout the world, with more on the newer continents of the Northern Hemisphere than on the older Gondwanaland continents of Africa and South America. Large areas of karst are found in former Yugoslavia, the European Alps, the Canadian Rockies, Vancouver Island, Southeast Alaska, Southeast Asia, the southeastern United States, New Zealand, Australia, North Africa, and parts of Brazil, (see handout). Caves generally form well only in rocks that are greater than 90% pure

Tim Harrison and Sergey Levachev take a break while caving in the karst at a Heceta Island alpine cave. Photo: Doug Feakes

carbonate material although a rock is considered a carbonate if it is greater than 50% carbonate materials. About 12% of the earth's dry, ice-free land is on carbonate bedrock but only about 7 to 10% is on karst terrain.

Q5: Why are karstlands frequently associated with human poverty?

A: It is likely that the stability of karst aquifers has led people to prefer karstlands for their more reliable year-round water. However karstlands are generally associated with thin and easily eroded soils. Historic mismanagement of karstlands has led to great loss of productivity and in some cases, desertification, in areas such as Appalachia, the Ozarks, Yugoslavia, Greece, the Yucatan Peninsula, and during Mao's Great Leap forward, huge areas of China (see handout).

Q6: Why do karstlands have thinner soils and why are they more prone to erosion than other areas?

A: Because karstic bedrock is soluble, only the impurities remain to form soils. Thus, soils on karst tend to be thin to start with. For example, when 100 feet of granite breaks down, 100 feet of soil building material remains. When 100 feet of the 98% pure limestone that occurs in areas of the Tongass breaks down and dissolves, only about 2 feet of soil building particles (the other 2%) remain. Drainage on karst can take place anywhere that openings greater than 1/5 inch exist in the bedrock. Such openings are common in well developed karst. Soils on karst are, in effect, sitting on a huge colander. In more traditional erosion (on non-karstified terrain), soil particles must be transported laterally to an area with significant turbulent water flow such as a stream. On karst, such flow can occur throughout the bedrock with soil transported directly into conduits within the rock and carried away rapidly.

Q7: What is the normal temperature in a cave?

A: Temperature in a cave is approximately equal to the mean annual ambient temperature of its surface environs. Thus, a cave in Southeast Alaska where our average temperature over the year is about 39F, is about 39F. A cave in the lowlands of Guatemala, will be closer to 85F.

Q8 Where is the karst in Southeast Alaska?

A: The best known karst areas with explored caves are on northern Prince of Wales, Dall, and northern Chichagof islands as well as on Heceta, Kosciusko, and other islands of Sea Otter Sound. Caves and karst are also present on Kuiu. Long, Etolin, Revillagigedo and Kupreanof islands as well as some parts of the mainland near Wrangell and Haines and in Glacier Bay NP. Nearby karst occurs in Wrangel-St. Elias National Park, on Vancouver Island, and in the Nahanni drainage in the Yukon. Extensive karst occurs in the Canadian Rockies, and the Brooks Range and parts of the Yukon. Smaller pockets are found throughout the North Country. These often occur in places such as the Lime Hills, White Mountains, Fossil Creek, Cave Creek, or other sites with names that infer limestone, light colored or sedimentary rock or cavernous rock.

Q9: How many caves have been discovered so far in Southeast Alaska?

A: Nearly 500. Most of them mapped by members of the Tongass Cave Project, part of the National Speleological Society, have been discovered since 1987. These range from caves less than 50 feet long to over 13,000 feet long. Southeast Alaskan caves and karst are of international and national significance for many reasons according to the Karst and Cave Resource Significance Assessment for the Ketchikan Area contracted by the Forest Service in 1993.

Q10: How are SE Alaskan caves usually mapped?

A: We map caves with a compass, clinometer, fiberglass tape, and a sketchbook. Each station is determined, and the azi muth, inclination, and distance to the next station noted. The distance from the station to the left and right walls and ceiling and floor is also noted. A sketch is made,of the plan view and profile view of the passage between the stations, and often a cross section of the passage is drawn. Trigonometry (now usually done with the aid of one of many cave mapping programs) allows an accurate 3-dimensional view of the cave and survey stations. Walls and features are drawn around this linear array of

points to create profile and plan views of the cave.

Q11: Where is the deepest limestone pit in the United States?

A: On northern Prince of Wales Island---El Capitan Pit is 598 feet deep.

Q12: Why do trees grow bigger on SE Alaskan karstlands?

A: Much of the forest in Southeast Alaska is poorly drained. The colander-like nature of karstlands allows for better drainage. Better-drained soils tend to support better tree growth here. It is interesting to note the very strong correlation between karst and large trees. Aerial photos show sharp changes in vegetation along what turn out to be contacts between carbonate and non-carbonate terrain. This line is frequently a border between low-volume forest and a clearcut now because high volume karstland forests have been harvested extremely heavily on the Tongass.

Q13: What are potential effects of road construction and timber harvest on karst and caves?

A: 1) Poor road construction or poorly planned drainage on karst can cause greatly increased sediment loads in surface waters. In addition, the removal of the canopy through timber harvest allows more rain to reach the surface with increased energy. This too can increase sedimentation of waters before they enter the karst.

2) Increased sedimentation can plug up drainage systems and increase siltation. This is a big problem for humans if their water resources are taken from karst. In addition, it can destroy the habitat of unique water dwelling troglobytic invertebrates and fish (although no cave-adapted fish are known to occur in SE Alaska, karst streams are known to be highly productive salmon streams). Such sediments can reach the underground through openings as small as 1/5 inch and affect the tiny crevices used by tiny invertebrates as well as silting up passages accessible to humans.

3) Timber harvest also changes the volume and timing of water reaching the underground, creating increased peak flows, and more frequent periods of low flow. This is because the ability of old-growth canopy to intercept precipitation is reduced by timber harvest.

4) Stalagmites, stalactites, and other cave formations (speleothems) may be silted over, altering their growth patterns and reducing their aesthetic appeal. Increased flows may also change water levels in the cave, allowing acidic waters to reach speleothems and to begin re-dissolving them.

5) High flows may change the direction that cave waters travel, allowing them to reach fossil passages and emerge in new areas, or even back up systems causing upland flooding.

6) Microclimate of cave openings can be altered dramatically if outside vegetation is removed. This frequently results in warmer and dryer entrances, a big problem for the many kinds of plants and wildlife that are adapted to cooler wetter areas.

7) In some cases, soils are lost and runoff changed to such an extent that regrowth on logged karst is greatly slowed or even non-existent even after just one harvest rotation. The effects of multiple rotations on temperate rainforest on karst is unknown, but a cautious approach seems prudent.

Q14: What could be the reasons that SE Alaskan streams originating on karst are more productive fish streams?

A: Several hypotheses exist. However, none has been adequately demonstrated to be the reason for higher productivity.

1) Karst-fed streams should have more stable flows due to the storage capabilities of underground channels and the greater precipitation interception by the large trees on the surface. This may prevent scouring of gravels important for spawning because peak flows will not be as high as in similar non-karst-fed streams.

2) Waters draining from muskegs and even forests are frequently highly acidic. Acidic waters accelerate development of caves, but may hinder fish reproduction. The dissolution of carbonate rock by these waters reduces their acidity rapidly. This means that karst streams are generally less acidic than other SE Alaskan

streams. These two may work together to create highly productive streams and unknown factors may also be playing a major role.

Q15: What wildlife uses Southeast Alaskan Caves?

A: Some of our 5 species of bats use caves as winter hibernacula and also apparently as summer day roosts. The caves are too cold to function as maternity roosts because young bats need warmth to develop rapidly. Bears are known to hibernate in our caves. SE Alaskan caves are also the habitat of a number of specialized cave-adapted invertebrates. Some of these are unique to SE Alaska; other recently discovered species are far from their earlier known ranges. These provide insights into glacial histories. The ranges may once have been contiguous but when extensive continental glaciation carved away the cave habitat between, it left populations on each side. This is evidence that SE Alaskan glaciation was not as extensive or uniform as once thought.

Q16: What significant paleontological and archaeological finds have been made in Southeast Alaskan caves?

A: Remains of ancient bears, seals, deer, caribou, marmots, otters, fish, and humans, have been found recently in SE Alaskan caves. Human bones dating to 9,880 years BP were discovered in 1996, the oldest human remains found in the state. Bones from a ring seal, a species presently known to inhabit only areas with shore-fast ice, date to 17,500 years BP, suggesting that our shores were edged by ice during that time. Caves have yielded evidence that both black and brown bears inhabited Prince of Wales Island 10,000 years ago although only black bears occur on Prince of Wales Island now. Bear bones dating to greater than 35,000 years BP, and marmot teeth to over 41,000 years BP have been discovered in SE Alaskan caves. This provides solid evidence that these species occurred here two glacial epochs ago. Caves provide a stable and basic environment ideal for preserving bones. This is in stark contrast to the acidic environment SE Alaskan soils provide generally. Thus, our caves have proven to be only source of ancient bones available enabling us to examine the species composition of early Southeast Alaska.

Q17: How do such finds affect current theories of human migration into the Americas?

A: Dominant theories of migration suggest that humans entered the Americas through an ice-free corridor just east of the Canadian Rockies about 12 to 15,000 years ago. An alternative theory proposes that at least some humans used ice-free refugia along the West Coast as stepping-stones to arrive in the Americas directly from the Bering land bridge. The presence of large mammals along the coast confirms that relatively large refugia did exist along the coast, rather than a monolithic mass of glacial ice. Although still controversial (icy seas still posed a large barrier) the findings from Southeast Alaskan caves are bolstering proponents of the coastal migration theory.

Q18: What are some of the hazards involved in exploring Southeast Alaskan caves? What techniques are necessary to safely explore these caves?

A: SE Alaskan caves are potentially extremely hazardous. Our caves tend to be young, with tight passages that can frequently flood. Cavers need to be aware of weather at the surface and the potential for flooding and entrapment or drowning. SE Alaskan caves are often vertical and entrance areas are subject to frost shattering and concomitant loose rock. Cavers need to be vertically proficient, able to rig ropes safely and to ascend and descend them. Loose rock is a constant hazard. It can injure people directly, cut ropes, or even block passages. SE Alaska caves are also cold. Cavers need to dress very warmly and be aware of the dangers of hypothermia. Specialized waterproof caving coveralls and synthetic clothing (and when working in flooded or stream passages, lightweight drysuits) help to alleviate these problems. Standard footwear for SE Alaskan cavers is the X-tra Tuff boot. As with all caves, to be safe, each caver should have a caving/climbing helmet with a light mounted on it, at least two other good sources of light, and sufficient batteries or carbide for well over the planned duration of the trip. Perhaps the most important elements to safe caving in difficult and extensive SE

Alaskan caves are good caving sense, caution, and members in the team experienced in Southeast Alaskan caves. Caving in SE Alaska is not something to be taken lightly. Cavers have avoided any serious underground accidents in 10 years of intensive exploration by following these rules, but we constantly review safety concerns and are aware that any serious accident deep in an Alaskan cave is likely to result in a fatality. See the section on groups to contact if you want to get serious about caving in Alaska. Don't take chances!

Q19: Are there karst areas and caves accessible to the public in SE Alaska?

A: Yes---Only a few caves are gated in SE Alaska in order to protect fragile formation, archaeological sites, and wildlife. The public can easily access several caves on Prince of Wales Island in the Thorne Bay Ranger District. El Capitan Cave, the longest in the state (over 12,000 feet of passage surveyed thus far) is gated just beyond the entrance, but tours through the easily accessible parts of the cave are provided during the summer by the USFS. Cavern Lake Cave, also on north Prince of Wales Island, has a trail to the entrance. It is a beautiful cave with a salmon stream flowing through it. Spawning salmon pass through the cave enroute to spawning areas in Cavern Lake. There are other caves that are relatively safe for the general public but none are easily accessed at present. It is easy to drive through a lot of the best-developed karst on Prince of Wales Island although to fully appreciate it one must get out and walk. Beware of the potential for deep sinks and pits, often hidden in the dense vegetation. A trail is currently being developed to showcase the karst near Beaver Falls Cave on northern Prince of Wales Island. Although all Tongass caves are theoretically accessible to the public, it is highly advised that anyone wishing to seriously explore caves contact either the Glacier Grotto or the Tongass Cave Project.

Q20: Whom should I contact if I want more information on karst and caves in Southeast Alaska?

A: Glacier Grotto, Alan Murray, President, 57 Main St. Suite 209, Ketchikan, AK 99901 (907) 225-7453 They publish the Alaskan Caver bi-monthly.

- Tongass Cave Project, Directors, Kevin Allred, Box 376, Haines, AK 99827;
- Steve Lewis, 212 Observatory St., Sitka, AK 99835 (907) 747-7471, ftswl@uaf.edu;
- Pete Smith, Box WWP, (Whale Pass, Prince of Wales Island) Ketchikan, AK 99950 (907) 846-5223, waleswood@aol.com
- USDA Forest Service, Ketchikan Area: Jim Baichtal or Cat Woods, Thorne Bay Ranger District,Box 1, Thorne Bay, AK 99919 (907) 828-3304

  Chatham Area: Ron Baer, 204 Siginaka Way, Sitka, AK 99835 (907) 747-6671 or, Jake Winn or Rachel Myron,

  Sitka Ranger District, 201 Katlian St. Suite 109, Sitka, AK 99835 (907) 747-6671

  Stikine Area: Everett Kissinger, Petersburg Ranger District, PO Box 309, Petersburg, AK 99833 (907) 772-5860

For more general information on caves and karst try: National Speleological Society, 2813 Cave Avenue, Huntsville, AL 35810 NSS@caves.org (205) 852-1300.---Publications include the NSS News and the Journal of Karst and Cave Studies and they have a karst and cave bookstore. American Cave Conservation Association PO Box 409, Horse Cave, KY 42749 (502) 786-1466---They publish a magazine, American Caves.

Some heavy but fascinating reading can be found in Bogli, Alfred. 1980. Karst Hydrology and Physical Speleology. Springer-Verlag. Berlin, Heidelberg, New York 284pp. ISBN 3-540-10098-9 Ford, Derek, and Paul Williams. 1989. Karst Geomorphology and Hydrology. Chapman and Hall, London. 599 pp. ISBN 0-412-44590-5 Jennings, J.N. 1987. Karst Geomorphology. Basil Blackwell, Inc. Oxford England and New York. 293pp ISBN 0-631-14032-8 Pbk White, William B. 1988. Geomorphology and Hydrology of Karst Terrains. Oxford University Press, Oxford and New York. 464 pp. ISBN 0-19-504444-4

These, as well as lighter reading on caves, karst, and bats can be found through the NSS Bookstore (see above) and/or through Speleobooks, PO Box 10, Schoharie, NY 12157, (518) 295-7981 e-mail:oldbat@albany.net or www.albany.net/~oldbat

WE CAME WE SAW CAVE

Heceta Island, Alaska • Preliminary Report #309

Cave # 10-5-4-307

Tongass Cave Project • National Speleological Society

Description:

We Came, We Saw Cave is also known as Been There, Done That Cave. The first name came upon initial discovery, the second after the cave failed to live up to initial expectations. It was surveyed on July 6, 1996, by Simon Dillon, Dan Monteith, and Tatiana Shadrina. They surveyed 33.96 meters (110.5 feet) of passage and reached a depth of 23.47 meters (77.0 feet). A 25 meter (82 feet rope was required.

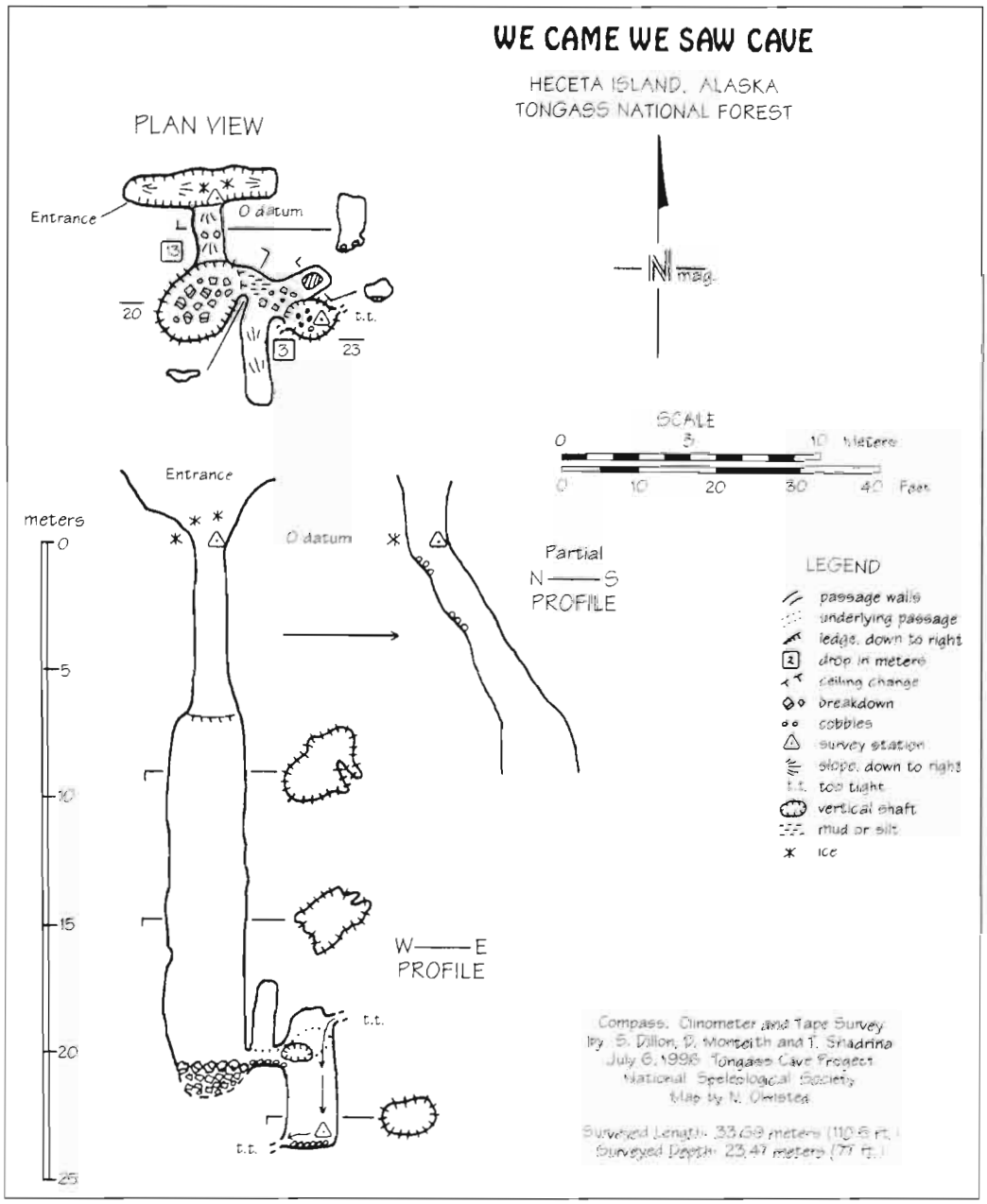
Time was required to deal with the ice and loose rock at the top of the pitch. The bottom of the first drop was filled with rubble and offers some hope for the caver with not much to do but dig. A tight passage leads to another small pit into which a small amount of water trickled. This water followed out a too tight lead at the bottom. There are no ongoing leads in this cave although digging is possible for another generation. Cavers need to be vertically proficient in this cave.

Management Recommendations:

The cave presents challenges for the experienced vertical caver with adequate clothing for the cold conditions., Rigging is challenging because of the hazards of loose rock and ice.

This cave and all the alpine caves on Bald Mountain should be protected from development.

Such protection should include the potential drains for these caves in the forested areas on the lower slopes of the mountains. Dye tracing may provide some intriguing clues about where the waters of Bald Mountain drain.



ACQUATIC VERTICALITY

Heceta Island, Alaska • Preliminary Report #283

Cave #10-5-4-305

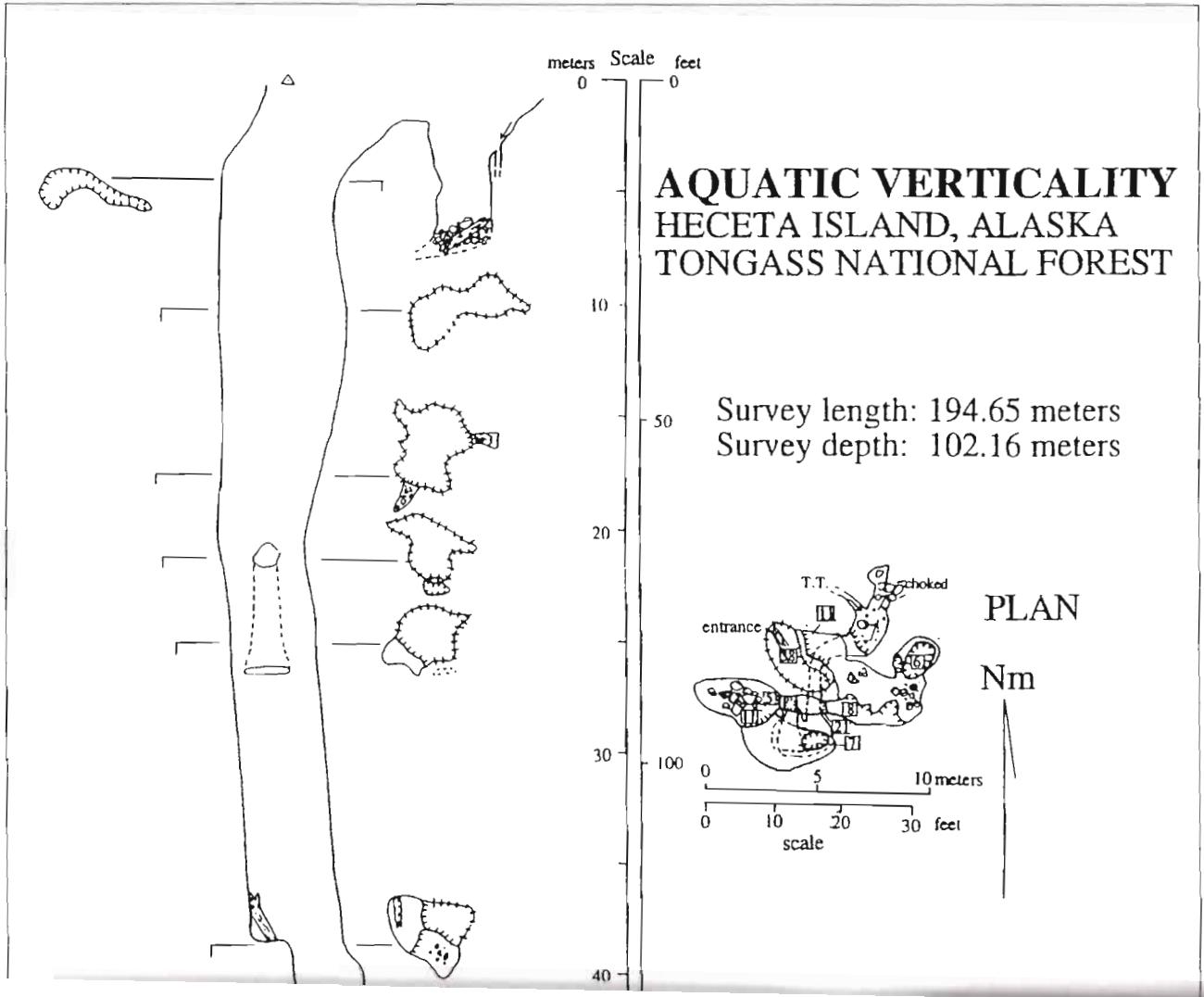
Tongass Cave Project • National Speleological Society

by Steve Lewis
February 28, 1998

Description: Aquatic Verticality was discovered by Steve Lewis and Eron Gissberg. The entrance is located at the edge of a large muskeg system which also drains into Limestoned Cave and It's Only a Wee Cave. A dramatic sink takes a small stream (pretty large during rain) which drops into a black, echoing hole. Drysuits were used to explore the cave because cavers are frequently showered on this incredible drop. The cave is almost entirely vertical. Total surveyed passage, including several parallel drops, is 194.65 meters (638.6 feet) with the cave choking 102.16 meters (335.2 feet) beneath the surface.

The initial 40 meter- (131.2 feet) free drop places one on a small ledge with a safe hidey hole. The drop is quite clean though, and another reason we used the ledge was to add another rope to our system. Another 10-meter (32.8 feet) drop lands the caver on a comfortable bottom, with pits leading down on both sides. This drop is spectacular, and spacious, with clean marble walls and showering water. The water adds charm and excitement to a drop that must be something like hanging in the tallest and most beautiful of the European cathedrals. A small climb puts one safely out of the way, so there is no need to stop above if using a long enough rope. A 6-meter drop to the east side lands one in a chamber with breakdown and deer bones on the floor. All leads are too tight or choked.

To the west, passage drops dramatically again, with the stream cascading down. This part could be dangerous at high flows (we surveyed this during a dry spell) as the passage gets smaller with clastic debris on the ledges. Part of the way down, a window opens into a second parallel shaft. This



shaft a few meters above the bottom. The main shaft changes character at about -87 meters (-285.4 feet). Clean marble walls are replaced by weakly cemented (with mud and organics) clasts and cobbles. It gets quite tight before bottoming out in a chamber where one can stand again. The stream continues into a small tight passage that quickly chokes with clasts and other debris. It is not clear whether the cave has broken out of the marble into a layer of less pure limestone, or whether these bottom levels are just a function of insufficient time for development. Such a rapid change was noted in Rethal Injection Cave in 1997 too. It will be interesting to determine whether the level at which this occurred is similar.

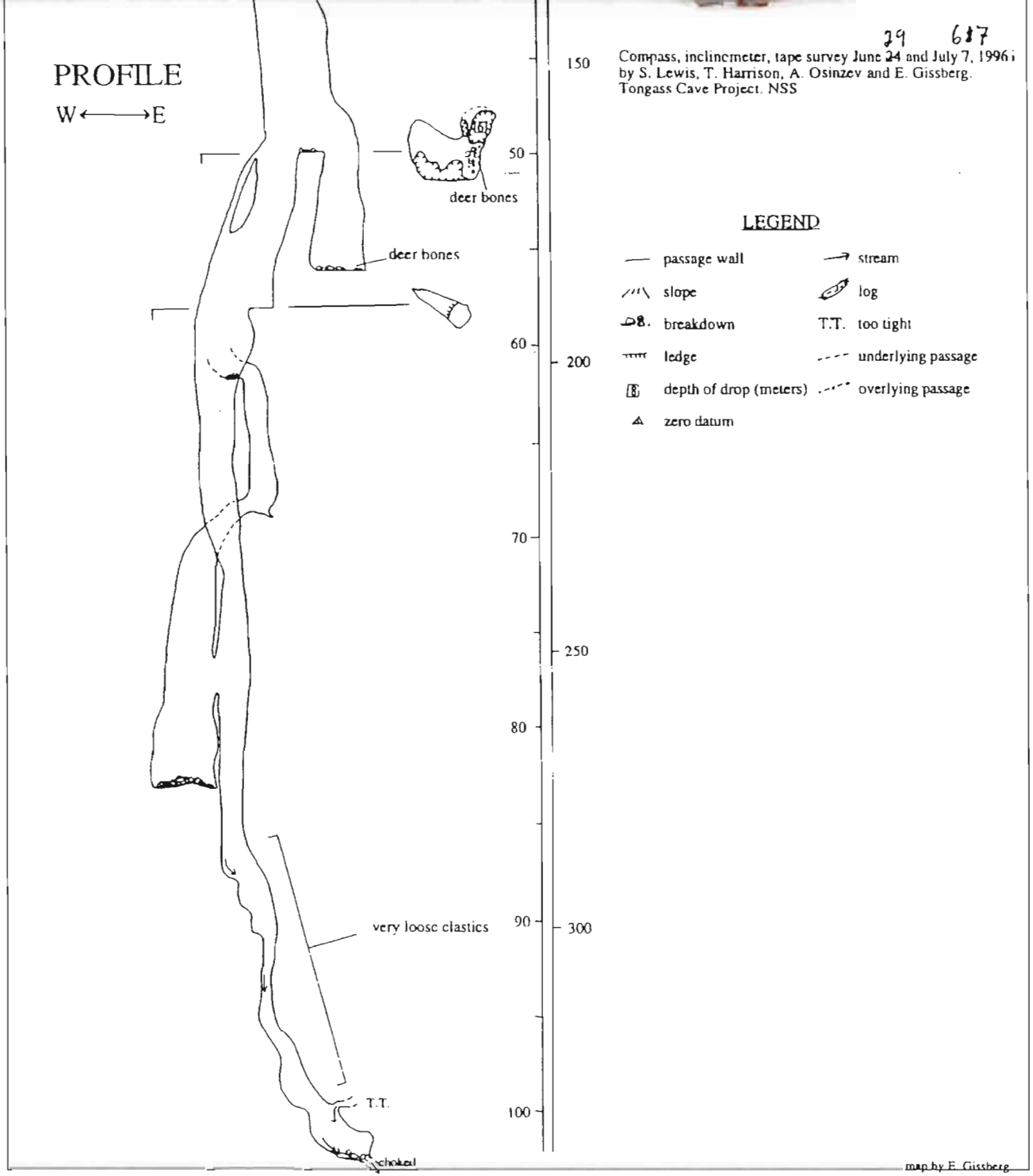
Paleontological: The cave contains deer bones and is a good natural trap. However, it is very active hydrologically and probably not a good repository for ancient bones.

Management Recommendations:

This cave is among the most spectacular vertical pits in Alaska. It is highly recommended as a wonderful recreational experience for the adequately prepared vertical caver.

It is an area of intense karst development. It's neighbor, It's Only a Wee Cave has been documented to drain to the Warm Chuck resurgence. It is virtually a certainty that Aquatic Verticality drains there too, probably joining with the waters from It's only a Wee Cave and continuing to Warm Chuck via the drainage basin to the northeast.

No further timber harvest or other disruptive management activities should occur within this block of highly developed and highly vulnerable karst. Research into the drainage patterns of this system and the disruptions caused by past and current management should be continued.



NOT ANOTHER CAVE

Heceta Island, Alaska Preliminary Report #280

Cave #10-5-4-292

Tongass Cave Project • National Speleological Society

by Steve Lewis
February 28, 1998

Description:

Not Another Cave was discovered by Steve Lewis, Julie Heaton, and Eron Gissberg on June 22, 1996. It was surveyed on that and the following day by those three as well as Amy Russell and Kevin Sellers. Total length of the cave is 108.62 meters (365.4 feet) and it became too tight even for Eron at exactly -57 meters.

This cave is located in the large clear-cut to the south of Arabica Cave. We discovered it enroute to a day of exploring the forested slopes of Timber Knob, thus the name. Although not deep, the entrance requires a handline or rope. Slash and organic debris floor the bottom of the entrance sink/pit. Clean marble floors the down sloping canyon passage. A boxwork above provides a good natural horn for rigging the first drop of about 7 meters (23.0 feet). A second 7 meter (23 foot) drop follows a nice chamber with cobbles and clasts on the floor. Some awkward moves lead to a bifurcation. The stream drops down a steep slope, plunging over a short overhang and then disappearing into a pair of too tight passages. A scramble up and through a tight spot brings cavers to the top of a tight drop. This continues into a well decorated tube with air flow emerging from a side passage that was too tight. The tube continues down with guano on the floor until reaching a section that was too tight.

Biology:

No biological survey was made. However, there was bat guano on the floor of the dry lower passage. The entrance may provide a natural trap although debris from earlier harvest obscures the floor at present.

Management Recommendations:

This is a fun cave for the beginning vertical caver. It offers short drops, in interesting natural rigging anchors, awkward but negotiable passage, and some unexpected discoveries such as guano, small speleothems, and some pretty chambers.

It is in an area of intense karst development . It's largest neighbor, Arabica Cave, has been documented to drain to the Warm Chuck resurgence, main drain for the huge block of karst which also contains Sinuous System, Vive Silva, and Icy Fate caves, as well as many of the caves and karst on Timber Knob and Bald Mountain. It is virtually a certainty that Not Another Cave also drains to Warm Chuck.

No further timber harvest or other disruptive management activities should occur within this block of highly developed and highly vulnerable karst. Research into the drainage patterns of this system and the disruptions caused by past and current management should be continued. Further exploration will yield many more caves.

Continued from President's Corner page 1

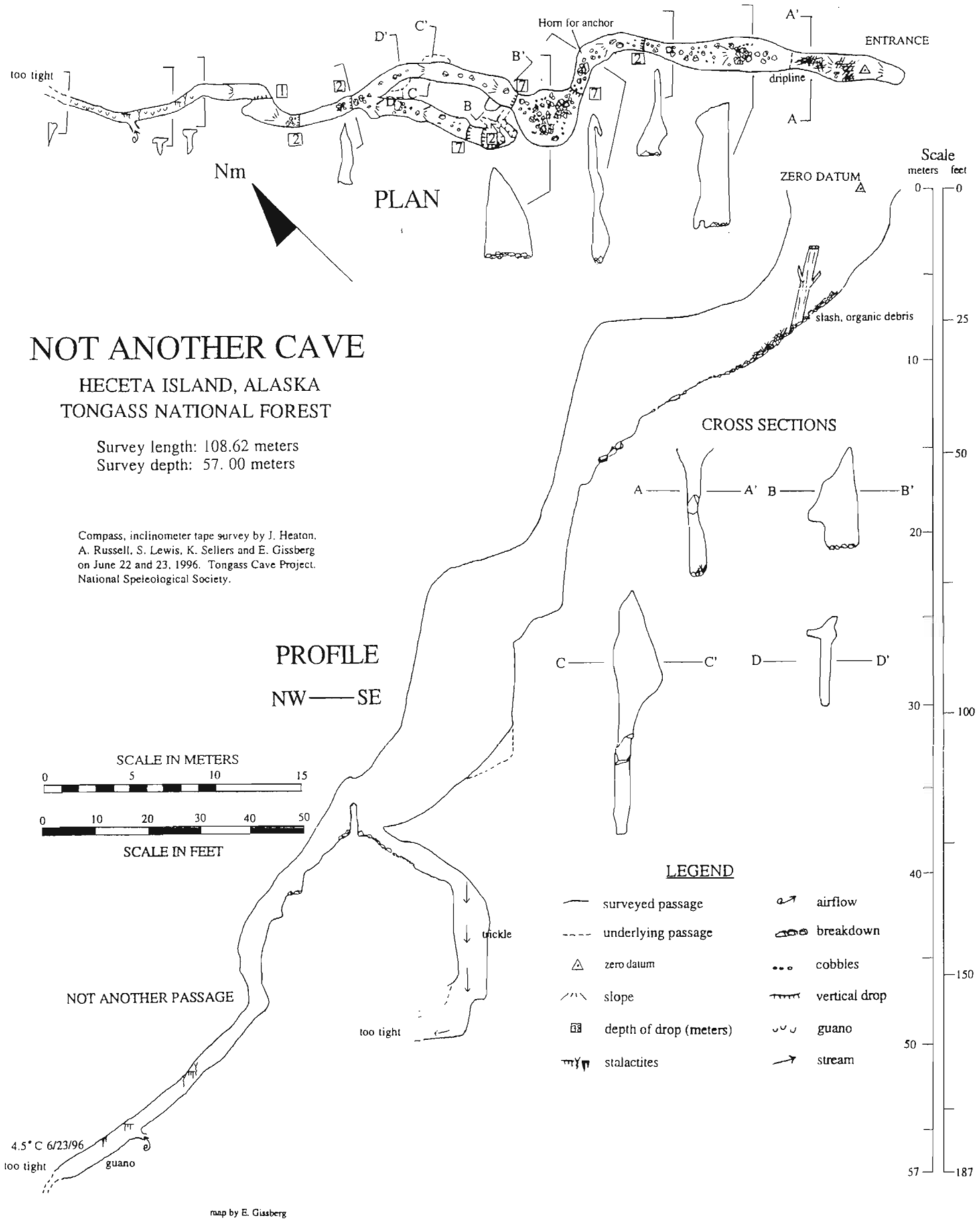
That agreement was signed by the Forest Service, Tongass Cave Project, and the Glacier Grotto. More information on the entire agreement will be available soon.

While cavers from numerous points around the globe were joining together for this year's expedition, a small group of Glacier Grotto members who are not able to take extended time off in the summer are exploring an area of marble in Carroll Inlet near Ketchikan. Jim Baichtal relayed information to me about some sinkholes that were found, and Ketchikan District Ranger Pete Griffin provided the Forest Service support that has enabled us to discover several caves and a truly fascinating geological feature. Reports, photos, and maps will soon be published.

And if we turn back the clock several months, it is possible to find that a large number of cavers and non-cavers embarked on a great underground movement...directed at me!

It seems that Skippy is alive and well, and has influence in powerful, distant and numerous places and with powerful, distant and numerous peoples. These included contacts in England, Japan, and Palau. All over Alaska and from nearly every state came countless pieces of "hate mail". Skippy was even able to conquer the elite Navy Seals, but he met his match when he confronted the U.S. Postal Service! All this has resulted in close to a dozen jars of peanut butter and over 50 packages of peanut butter crackers being sent to me. I even received some peanut candy and other peanut related items.

Rest assured that I will continue to be repulsed by peanut butter, and will never rest until every culprit receives his punishment. That is except for the Navy Seals... I'm not that crazy!


too tight
Horn for anchor
ENTRANCE
dripline
A'
A
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C
D'
D
Nm
PLAN
Scale
meters feet
ZERO DATUM
slash, organic debris
NOT ANOTHER CAVE
HECETA ISLAND, ALASKA
TONGASS NATIONAL FOREST
Survey length: 108.62 meters
Survey depth: 57. 00 meters
Compass, inclinometer tape survey by J. Heaton, A. Russell, S. Lewis, K. Sellers and E. Gissberg on June 22 and 23, 1996. Tongass Cave Project. National Speleological Society.
CROSS SECTIONS
PROFILE
NW—SE
SCALE IN METERS
SCALE IN FEET
LEGEND
surveyed passage
underlying passage
zero datum
slope
depth of drop (meters)
stalactites
airflow
breakdown
cobbles
vertical drop
guano
stream
trickle
too tight
NOT ANOTHER PASSAGE
4.5° C 6/23/96
too tight
guano
map by E. Gissberg

IT'S ONLY A WEE CAVE

Heceta Island, Alaska • Preliminary Report #310

Cave #10-5-4-306

Tongass Cave Project • National Speleological Society

by Steve Lewis and Nick Olmsted
February 28, 1998

Description:

It's Only a Wee Cave is located very close to Aquatic Verticality. It was surveyed by Simon Dillon and Dan Monteith on July 4, 1996. The cave is essentially vertical, with a total surveyed length of 69.4 meters (227.7 feet) and a depth of 52.6 meters (172.7 feet). It takes water from adjacent muskegs with flows ranging from just about nil to very large volumes. The pit drops from steeply sloping sides and forms a very good natural trap. The southern drop has pirated flow from the older northern drop. Both plunge about 125 meters (82 feet) rejoining about 10 meters above the cobble covered ledge. The cave continues down several more steps as a high narrow canyon before the stream enters a too tight passage 52.6 meters (172.7 feet) below the surface. The cave appears to fill with water to well above this level during high flows.

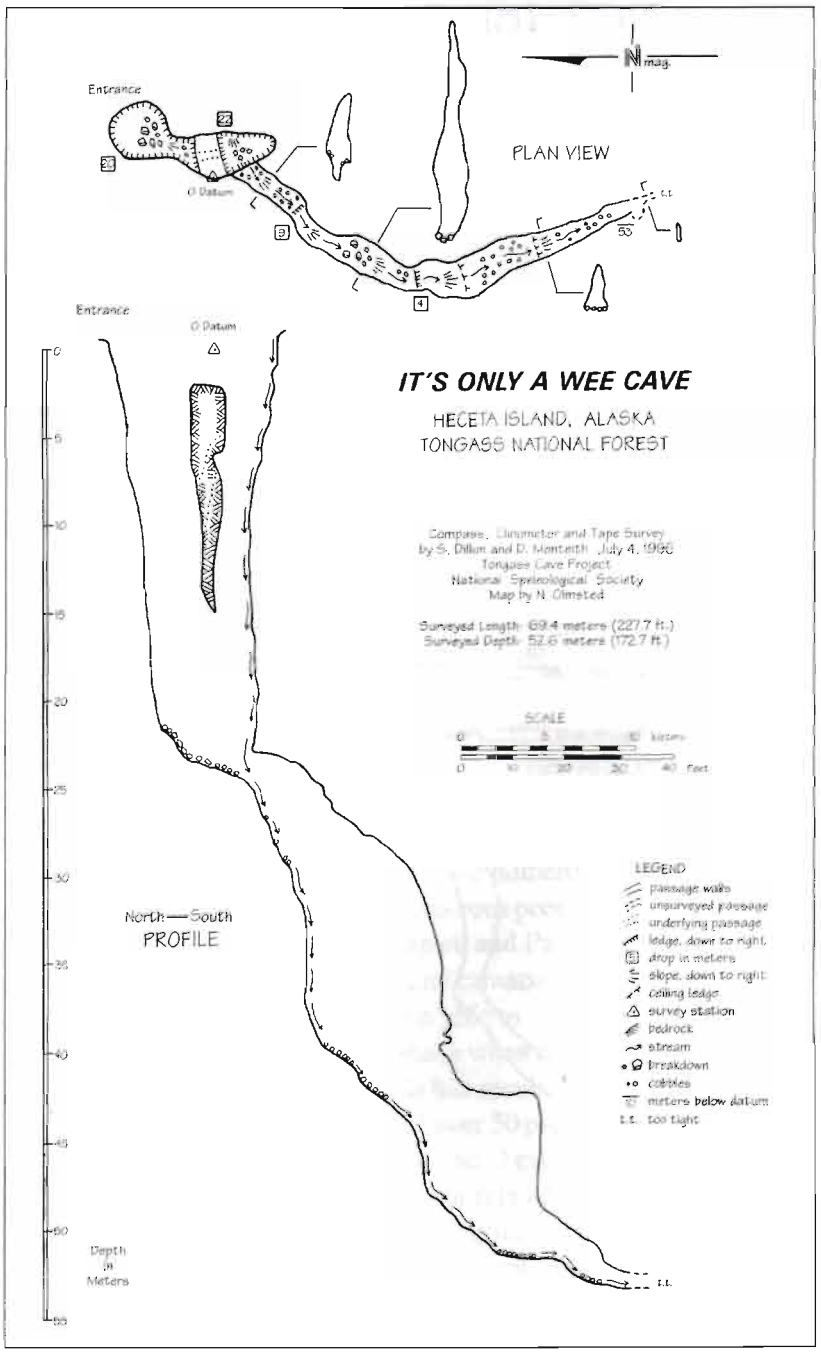
Biological and Paleontological:

Deer remains were found on the first ledge. The active water flow into the cave suggests that little will remain for long periods, however. No biological survey was made.

Management Recommendations:

This cave is hydrologically important and adjacent to a spectacular cave, Aquatic Verticality. It is in an area of intense karst development. It's Only a Wee Cave has been documented to drain to the Warm Chuck resurgence, main drain for the huge clock of karst which also contains Arabica, Aquatic Verticality, Sinuous System, Vive Silva, and Icy Fate caves, as well as many of the caves and karst on Timber Knob and Bald Mountain. Water from It's Only a Wee Cave probably joins with the waters from Aquatic Verticality before continuing to Warm Chuck via the large drainage basin to the northeast.

No further timber harvest or other disruptive management activities should occur within this block of highly developed and highly vulnerable karst. Research into the drainage patterns of this system and the disruptions caused by past and current management should be continued. Further exploration will yield many more caves.



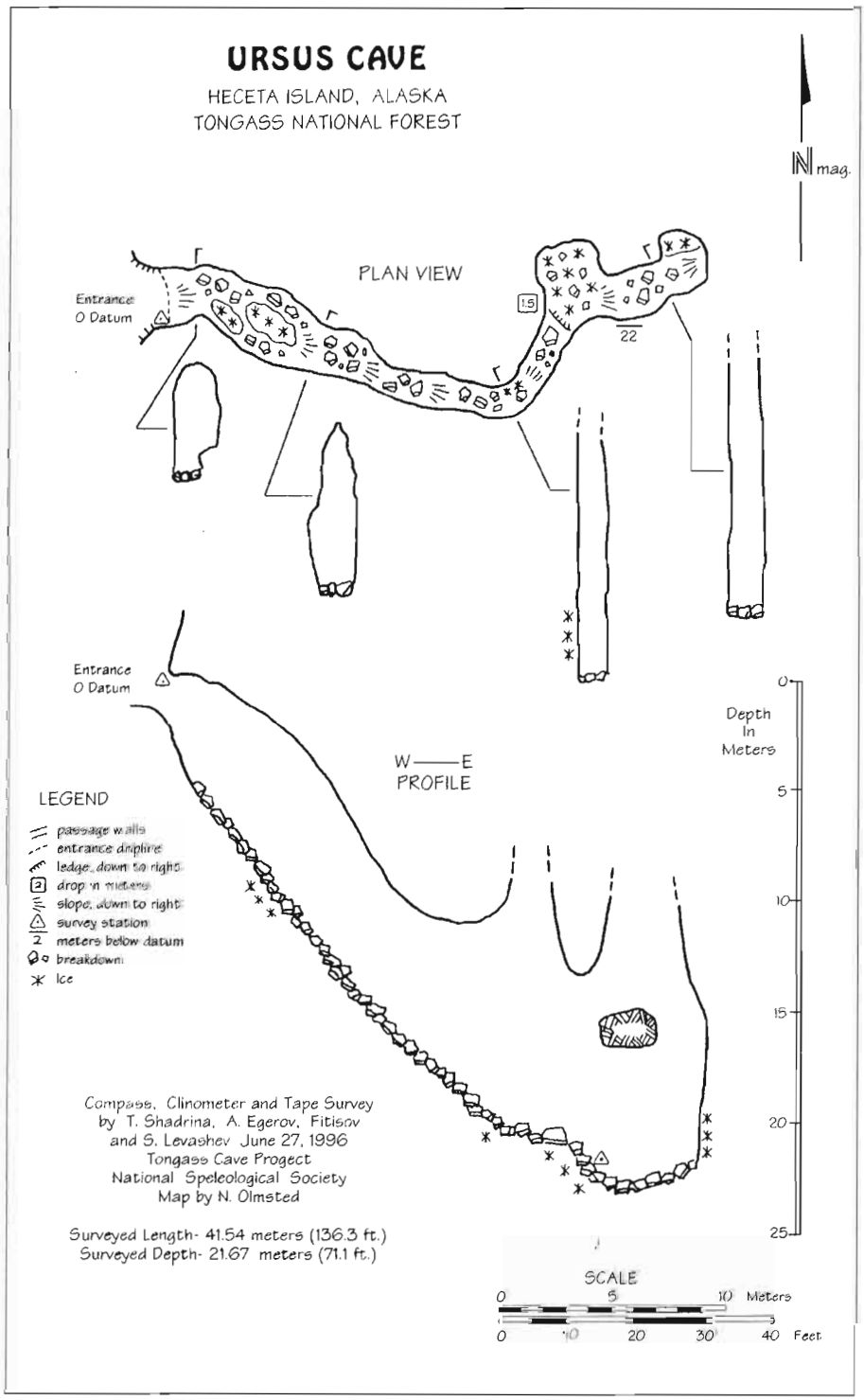
URSUS CAVE

Heceta Island, Alaska • Preliminary Report #308

Cave #10-5-4-287

Tongass Cave Project • National Speleological Society

by Steve Lewis and Nick Olmsted
February 28, 1998



Description:

Ursus Cave is named for the children's section of the Arabica Speleoclub in Irkutsk, Russia. As in English, Ursus has something to do with bears.

Ursus Cave was surveyed by Tatiana Shadrina, Alexander Yegorov, Yuri Fetisov, and Sergey Lavashev on June 27, 1996.

There are 41.54 meters (136.3 feet) of surveyed passage and the cave is 21.67 meters (71.1 feet) deep. Unlike many of the caves on Bald Mountain, Ursus Cave does not require vertical equipment or skills. A sloping breakdown floored passage trend from west to east, ending in a tall narrow canyon. Several domes remain unexplored at the bottom, of the cave. There were no accessible leads above the cave in the vicinity of these domes. No speleothems, animal remains, or other items of biological interest were noted. There were several sections of the cave floored with ice when the cave was explored and surveyed.

Management Recommendations:

This cave is a relatively safe and easy cave compared to the many tight, vertical caves on Bald Mountain.

All the caves on Bald Mountain should be protected from development. Such protection should include the potential drains for these caves in the forested areas on the lower slopes of the mountains. Dye tracing may provide some intriguing clues about where the waters of Bald Mountain drain.

Continued from page 1

ered up" by the Forest Service throughout the years. Bradfield River is another.

As I and my survey crew made our way through the trackless wilderness of a seemingly infinite forest, never in our wildest dreams did we think that within a few short decades this vast area would be overharvested to the extent that it is today. A parallel to the slaughter of the buffalo in the West.

Now at the end of the century battles are raging over the pitiful remnants of this once mighty high volume old growth forest known as Prince of Wales Island that was once so rich in fish and wildlife resources in addition to a king's ransom in high quality old growth timber. The Control Lake Project Area is the last intact area of significant size on Prince of Wales as you well know.

Although the two "dinosaur" long term contracts have been rightly cancelled, the Forest Service continues to "log behind the curve" and prostitute its professional and moral ethics to the political pressures of industry and their "owned" lackeys, the Alaska Congressional Delegation, by favoring an alternative for the Project Area that produces 187 million board feet with the construction of 169 miles of road. This on an island that now appears from the air like a plate of spaghetti on a patchwork quilt.

The only shining light, with exception of the No-Action in the alternatives presented is number 10. The Citizens Alternative is the best example yet of what "collaborative stewardship" should be all about. Unfortunately, it is some 20 years late, but better late than continue as before. As the timber industry grants, including the Alaska Native Corporations, have already taken the lion's share surrounding the Project Area and throughout Prince of Wales, what remains must be allocated to local small timber operators to be harvested at a sustainable level of harvest that does not continue to mortgage the future.

Alternative 10 provides the highest financial return to the federal treasury and most importantly to the local and Southeast Alaska Communities long term. Alternative 10 provides the best job of protecting the remaining fish, wildlife and subsistence opportunities on this once resource-rich island.

The areas surrounding the Project Area, i.e. the entire remainder of Prince of Wales Island, has been subject to both the destructive logging practices allowed under the two 50-year long term timber contracts and even the far worse logging practices on the Alaska Native Corporation land grants taken from National Forest lands under ANSCA. Here logging was guided by the toothless and ineffective Alaska Forest Practices Act which was overly influenced by timber industry lobbyists when it was written by the Alaska Legislature.

Until the entrenched and vindictive U.S. Forest Service bureaucrats, including some high level retirees still live in Alaska, with conflict of interests inherent in their close ties with the timber industry and the Alaska Congressional Delegation, have ceased to breathe, ethical management of what's left of the Tongass Forest will continue to "lag behind the curve". These dinosaurs must be swiftly forced to retire and be replaced with the visionary's now emerging throughout the Service. Chief Dombeck is one of these visionaries, as well as Regional Forester Phil Janek.

I request this document be entered into the formal record of public comment and published in the final EIS.

I remain,

Ben Mitchell, USFS retired.

EXCHANGES

The CLEVE-O GROTTO News, Vol 43 (10) October 1997, p. 77. Dave Gewely reports that a partial upper jaw of a 10,600-12,000 year old porcupine with very worn molars was found. At the time of the writing, the carbon 14 dating had not been completed. "Another tiny flint flake from a worn Paleoindian tool was found." The digs ends in 1998.

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American Caves Vol 10(1), Spring-Summer 1997. Recent discoveries in Caverna da Pedra Pintada, a Brazilian cave found in the Amazon rainforest, have challenged the long-held belief that South America was first populated by descendants of the North American Clovis culture. The discovery of finely crafted spear points in the cave and astronomical symbols and cave art on its walls has now proven that a distinct culture already existed on the continent 11,000 years ago when the Clovis culture was developing in North America. It was also thought that the first inhabitants were big game hunters living on the grasslands as the rainforest could not support a sizable population without agriculture. The new findings however, show that a culture survived in the rainforest by gathering nuts and berries, fishing, and hunting both large and small game. (Source: The Courier-Journal, "People/Science" section, April 19, 1996.)

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BIRMINGHAM GROTTO NEWSLETTER October 1997, p.104. Audrey Thomas says one of the reasons she likes caving "is a spirit of comraderie among cavers which enhances every underground discovery."

BARMY RUBBLE POT

Heceta Island, Alaska • Preliminary Report #279

Cave #10-5-4-279

Tongass Cave Project • National Speleological Society

by Steve Lewis
February 28, 1998

Description:

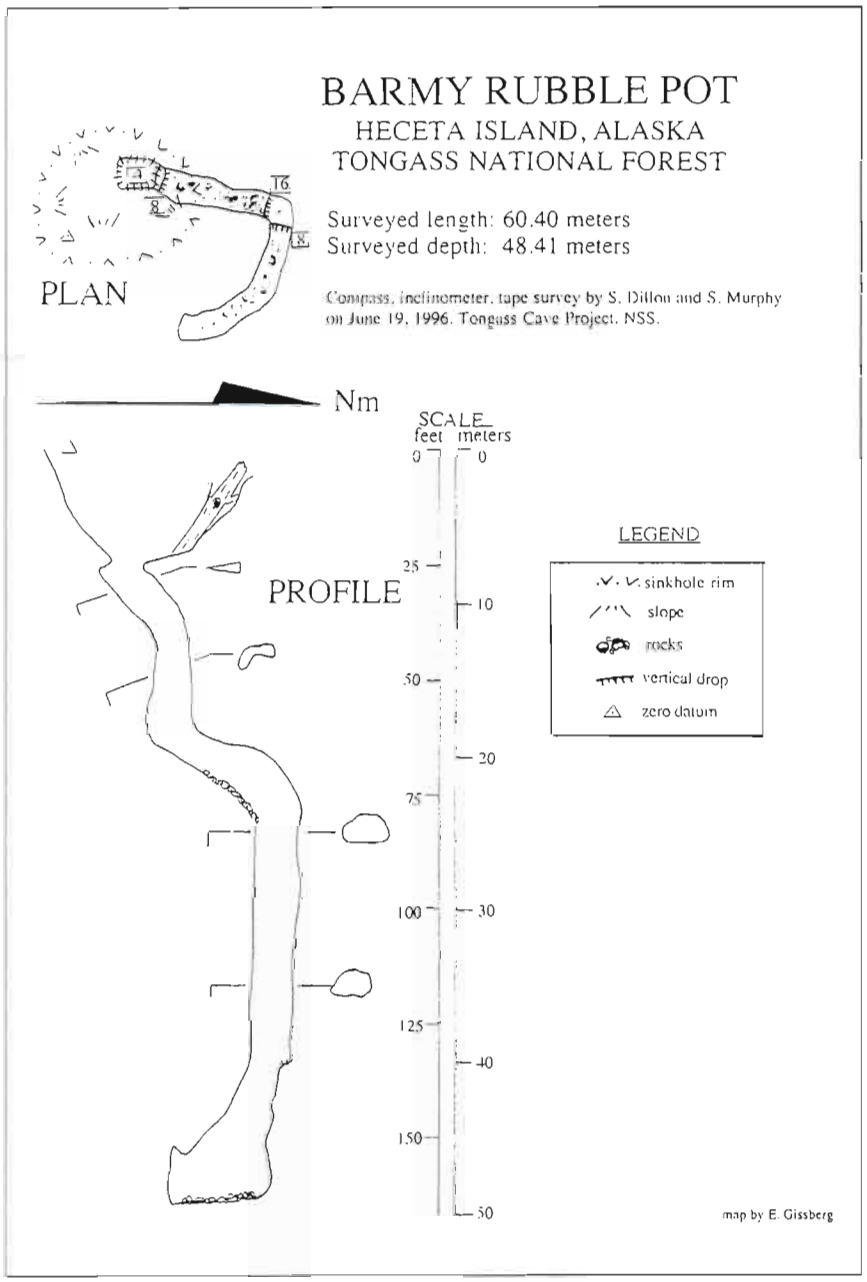
Barmy Rubble Pot was discovered by Simon Dillon, Steve Murphy, and Steve Lewis. It is very near to Vive Silva Cave. Dillon and Murphy returned on June 19, 1996. They used a 60 meter (197 foot) rope, rigging from just inside the entrance pit. Loose rock plagued the entire trip, with steep and unstable breakdown at the entrance on down to the top of the vertical section. The cave was surveyed to a length of 60.40 meters (198.2 feet) and a depth of 48.41 feet).

The cave formed along a small fault. Several small skylights were present and at the bottom a small stalagmite and a curtain were present. No leads remain. Some of the comments from the trip sheet say much about the cave. As for Biology: "Scared Cavers", and for Educational Values: "Could use it to get rid of cavers you don't like". While certainly in jest, these do show the disappointing nature of the cave which failed to live up to the expectations engendered by its relatively large sink entrance and the nearby presence of Vive Silva.

Management Recommendations:

This cave is not recommended for further exploration. It is hazardous and the aesthetic and recreational values present do not warrant the risk to future explorers. However, it is in an area of intense karst development and very close to Vive Silva Cave, presently the deepest cave in Alaska. The drainage for Vive Silva has been documented to be the Warm Chuck resurgence, main drain for the huge block of karst which also contains Arabica, Sinuous System, and Icy Fate caves, as well as many of the caves and karst on Timber Knob and Bald Mountain. It is virtually a certainty that Barmy Rubble drains there too.

No further timber harvest or other disruptive management activities should occur within this block of highly developed and highly vulnerable karst. Research into the drainage patterns of this system and the disruptions caused by past and current management should be continued. Further exploration will yield many more caves.



VIVE SILVA

Heceta Island, AK • Preliminary Report #313
Addendum to Report #248 • Cave #10-5-4-251
Tongass Cave Project • NSS

by Steve Lewis
February 28, 1998

Description:

Exploration of Vive Silva (Long Live the Trees) continued in 1996. Russian cavers Sergey Levashev, Alexander Osintzev, and Tatiana Shadrina pushed the cave to it's too tight bottom on June 20th and 24th, 1996. The cave now contains 347.1 meter (1,138.8 feet) of passage and is 242.8 meters (796.6 feet) making it the deepest known cave in Alaska at this time. Passage continued much as before, with series of clean drops mixed with occasional chambers floored with breakdown and some sediments. Strong upward air flow was noted in the lower reaches of the cave. Near the bottom the cave begins a spiral descent. Water flows out the bottom through a short segment of too tight passage of 12 centimeters (5 inches) width that opens up again to a tight meander within 30 centimeters (12 inches).

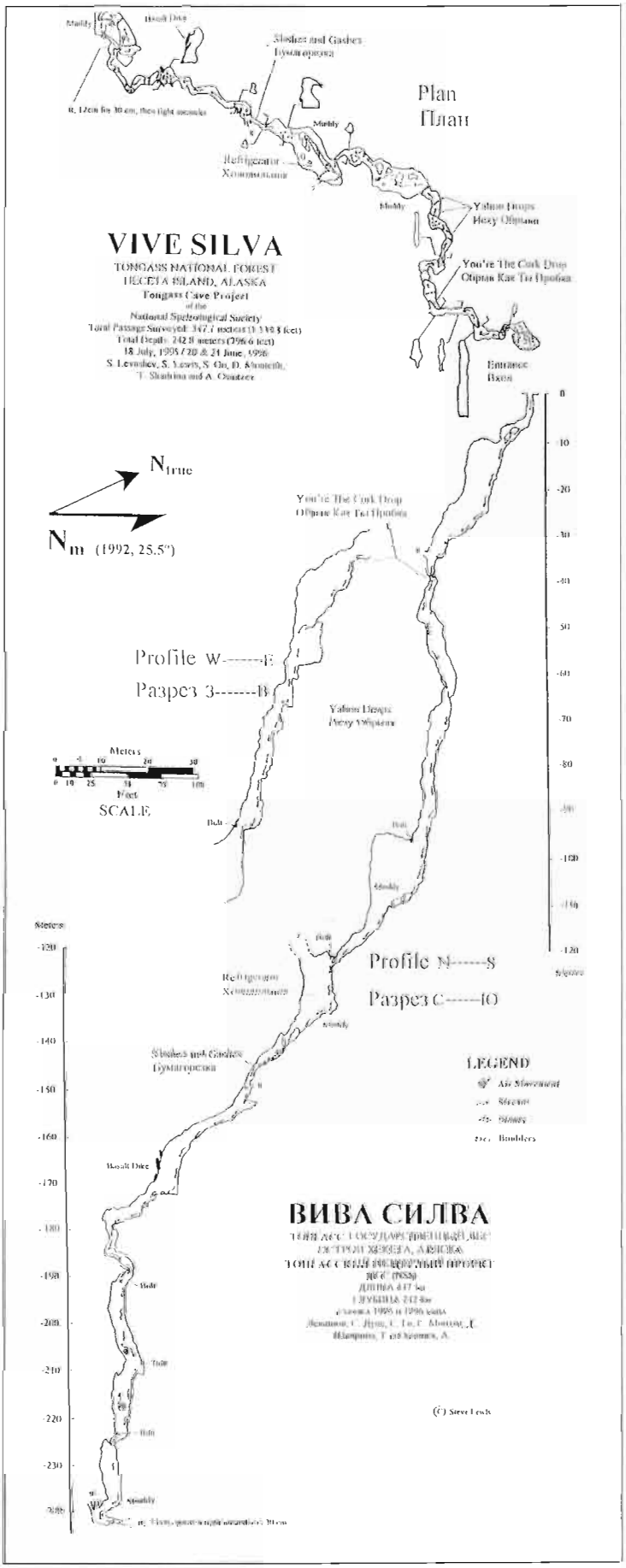
Already the deepest cave in Alaska, Vive Silva could be pushed to still greater depths by a dedicated team willing to widen this constriction and to haul the inordinate amount of rope necessary for exploration of this cave. A number of bolts were placed in the cave. Hangers were removed but flagging should be inserted into the threaded inset for the standard Petzl 7 mm hanger.

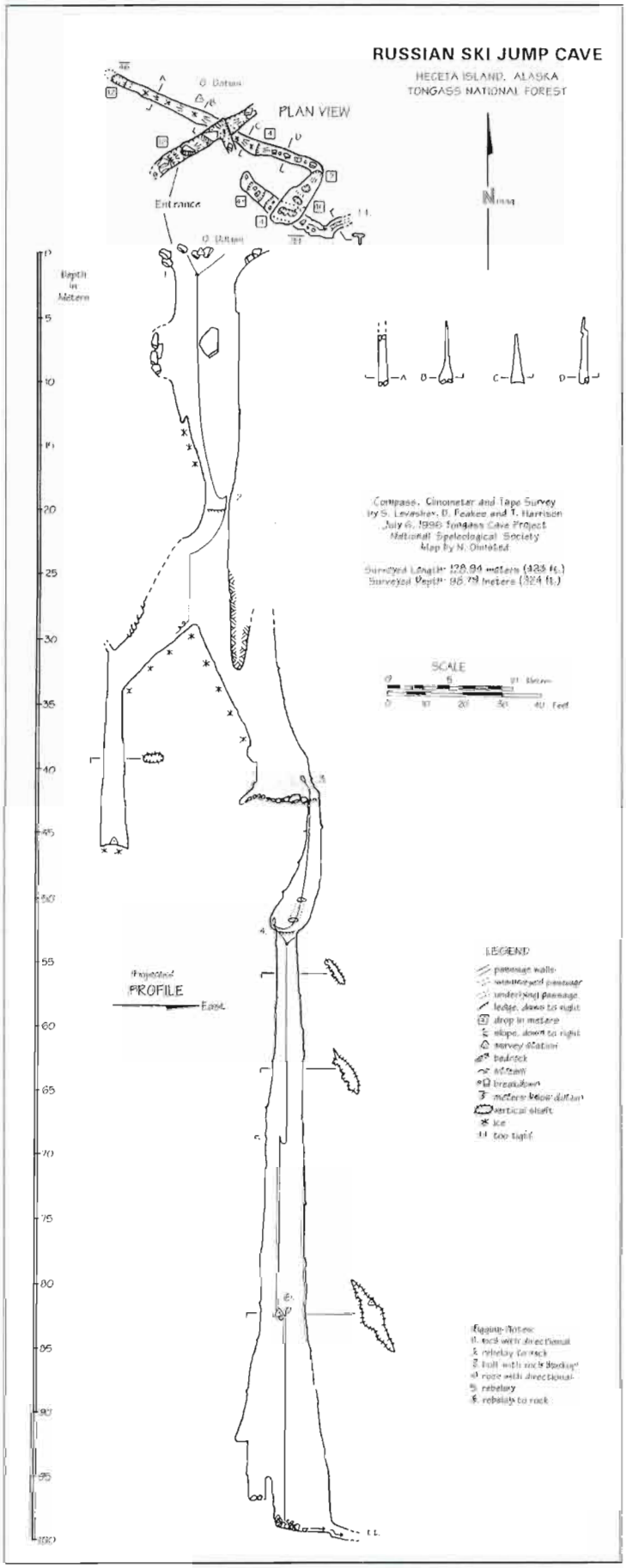
Management Recommendations:

This cave is among the most spectacular vertical pits in Alaska. It is highly recommended as a recreational experience for the adequately prepared vertical caver. However, the cave is difficult, with several very awkward squeezes on rope. In addition, many hundreds of meters of rope are necessary, mostly in relatively small sections for rigging the cave.

Vive Silva is in an area of intense karst development. Dye traces have documented it to drain to the Warm Chuck resurgence, main drain for the huge block of karst which also contains Arabica, Sinuous System, and Icy Fate caves, as well as many of the caves and karst on Timber Knob and Bald Mountain.

No further timber harvest or other disruptive management activities should occur within this block of highly developed and highly vulnerable karst. Research into the drainage patterns of this system and the disruptions caused by past and current management should be continued.





LEDOKOL-E CAVE

Heceta Island, Ak • Preliminary Report #305

Cave #10-5-4-293

Tongass Cave Project • NSS

by Steve Lewis and Nick Olmsted
February 28, 1998

Description:

Ledokol-E Cave is named for Sasha Egorov, and his expertise in pushing through the icy leads in the cave. Ledokol is Russian for icebreaker. Actual survey in the cave was done by Tatiana Shadrina and Yuri Fetisov on June 28, 1996. The entrance drop of about 25 meters (82 feet) opens into a large chamber with a breakdown and ice floor. From here, two vertical shafts drop about 30 meters (100 feet), rejoining each other after about 25 meters (82 feet) and continuing down to a small chamber and steeply sloping breakdown passage. This continues down over ice and breakdown to a depth of 67.35 meters (221.0 feet), the deepest point in the cave. Surveyed passage amounted to 92.57 meters (303.7 feet). There is ice on the shaft walls, and the slope leading to the bottom is very icy. No leads were noted. Nor were any speleothems, biota, or bones noted.

Management Recommendations:

The cave presents challenges for the highly experienced vertical caver with adequate clothing for the cold conditions. This cave and all the alpine caves on Bald Mountain should be protected from development. Such protection should include the potential drains for these caves in the forested areas on the lower slopes of the mountains. Dye tracing may provide some intriguing clues about where the waters of Bald Mountain drain.

EXCHANGES

Bob Roel keeps readers up to date in his article "Vancouver Island 97." He tells of the current expeditions into the wilds of the island's karst regions. Highlighting the trip is a drop into Dreamtime Cave, reputed to have the largest marble chamber in Canada.

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CALIFORNIA CAVER issue 205, Winter 1997, p10. Doug Medville reports on recent survey and mapping of lava tubes in the North Kona District on Hawaii. A description of 2.6 miles of passage in 13 lava tubes is included in the article. The remaining seven tubes will be reported in a separate article.

MISCELLANEOUS

Notes from the minutes of the 1998 Northwest Caving Association minutes

The meeting was called to order by Chairman Michael Compton May 26, 1998, at the Trout Lake County Park in Washington.

Since the meeting lacked a quorum all decisions and proposed actions at this meeting were referred by the presiding officer to the balance of the voting members.

Gem State Grotto Representative Jim Hathorn gave a detailed status of the preparations for the 1999 NSS Convention scheduled for June 20 at Twin Falls, Idaho. He stressed the need for assistance from cavers and others from throughout the Pacific Northwest, Canada and Alaska.

Glacier Grotto Representative Dave Klinger asked representative's present if their grottos were still maintaining the NSS cave registers. With the exception of Gem State Grotto none appeared to be doing so. Dave indicated the need to keep these up to date.

Dave also reported that this year's Ketchikave Expedition had reached capacity and those interested in attending should consider registering for next year.

The National Cave Management Symposium Steering Committee is looking for a site for the 2001 Cave Management Symposium somewhere in the west or southwest. Anyone interested should contact Janet Thorne, Steering Committee Chairman. E-mail address: Wesbike@aol.com

Jim Harp was elected chairman of the NCA and conducted the remainder of the meeting.

Jim said the NCA's number one priority for the following year was support of the 1999 NSS Convention being held July 12-16, 1999, in Twin Falls Idaho.

He announced that the next meeting of the NCA Executive Board will be Twin Falls during the 1999 NSS Convention. The exact date, time ad location will be announced.

Jim requested a motion to provide the new NCA secretary, Leonard Slack, with up to $50 for expenses. The motion was made, seconded and passed.

When asked about the status of Papoose Cave, Gem State Grotto Representative, Jim Hathorn, reported that the management plan was being reviewed and that differences were being resolved between Gem State Grotto, Papoose Cave Project and the U.S. Forest Service. This resulted in a general discussion concerning Papoose Cave and the fact that Gem State Grotto will be hosting a series of tours over labor day weekend.

The meeting adjourned at 11:15 am.

In the course of a year, a number of grotto newsletters find their way to my in-basket. They make fascinating reading but often , I become aware of concerns, hidden in an article, that need to be discussed. In some cases the topic has been tiptoed around, over and under for several years but never brought into the open.

A well-conceived Letter to the Editor can quite effectively address controversial issues. The letter does not have to be long or terribly involved but should state the facts as the writer knows them. Keep it simple and to the point. Expect rebuttal.

Address: 1921 Congress Cir. Apt B Anchorage, 99507
e-mail: dtperrigo@aol.com.

-Editor

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