In This Issue
TCP an Advocate for Karst Ecosystem
Alpine N23 Cave
The Alaskan Caver
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Marcel LaPerriere - Editor

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Cover Photo: Limestone peak Mnt. Francis located on Kosciusko Island. Photo by: Kris Esterson
Back Photo: From left to right, Rob Knotts, Steve Lewis and Dan Monteith explore Diver Island sea caves. Photo by: Kris Esterson

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June President's Corner & Open Letter to the USFS  By: David Love

Dust off the dried cave mud, toss out that spent carbide and gird up your loins, caving season is almost upon us! From what I have heard through the electronic grapevine, there will be plenty of informal expeditions to be involved with this summer: POWIE 2000 headed up by Pete Smith will continue to explore cave systems on Prince of Wales Island with a possible exploratory trip to Dall Island during the month of July. A variety of nutritious food will be provided. Make your own travel arrangements. (Contact Pete at waleswood@aol.com or by phone at 907-846-5223).

KOS 2000 lead by Barbara Morgan will happen from June 17 to July 7 on Kosciusko Island and will be self-support.

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CALENDAR

**July 2000** Pete Smith will manage another Prince of Wales Island expedition this year. From July 1st to 31st. Food will be supplied. Target areas will be Eagles Roost Cave, Zina Cave and more inventory in the Staney Creek area. Contact him at 907-846-5223 or waleswood@aol.com

**June 26-30, 2000**...NSS Convention, Elkins W.V. Kelley Deem (304)725-9812 <deem@mammotth.geo.com>

**Sept. 17-27**...Karst 2000: International Symposium and Field Seminar, Marmaris, Turkey. <karst@eti.cc.hun.edu.tr>

**Ketchikan Area Grotto** meetings are the first Monday, at 7 pm at Ketchikan Public Health Center 3050 Fifth Ave. 907/247-1559 or marcel@alaskamade.com OR ajmurray@ktn.net

**Soutcentral Area** meetings or expeditions will be called by Jay Rockwell 277-7150 or Harvey Bowers at <agate@alaska.net>

THE GREATEST UNDERGROUND ADVENTURE OF ALL TIME

by Marcel LaPerriere

Installment XI

(The following story is just that, a STORY. All the cavers in the story are real people, but the story is total BS. No attempt was made to change or alter names, and no harm was meant by using real names. The author is totally responsible for the story and in no way is the Glacier Grotto, the NSS, or members or officers responsible for the content. The intent of the story is to have some fun through total fantasy. Marcel)

I'm not sure who was more bedazzled: Coulanta's people or those of us from the above ground world. Yes, we had known that we would soon be meeting more underground people, and yes, Coulanta's people too had known they would soon be meeting people from the above world. The reality of the meeting was surreal for both groups of people. Just think about it—we were meeting a group of people that for all intents and purposes was a lost race. The below world people knew we existed, but never dreamt they would actually meet people from the above world. Most of the below world people had known no other life than that of living below the surface of the Earth.

"Hello," we greeted our new friends with a slight bit of apprehension in our voices.

"Hello and welcome," we were greeted. Like Coulanta these people had an accent that was sometimes hard for us to understand. (Author's note: The reader of this must take into account that I have not added the accent of Coulanta or his people into this writing. First because much of the quotations are more recollections than actual dialog. And second, I would find it impossible to literally write down the accent to a point that you the reader could understand it.)

Coulanta started talking very rapidly to a young man that I rightfully guessed was his son. Then his son said, "I'm Ralph, please join us for dinner."

"Ralph!" I thought to myself. What a simple and plain name for a son of the exotically named Coulanta. I was tempted to ask why his name was so normal, though out of politeness I didn't.

We followed Coulanta and Ralph as they lead us into a small village, that if it wasn't underground would have looked like a shanty town one would expect to see in some third world country. The buildings were made from a painted

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Cavers on Kosciusko should expect some more fantastic experiences! Cavers will need to provide their own travel and food expenses. There may be some funding available through the USFS but details unavailable at the time I put this President's Corner together. Barbara can be reached at akphoenix@hotmail.com. Kevin and Carlene Allred have planned a combination strawberry canning/caving expedition up the Lynn Canal in mid-July. Should involve only a few of the local Haines, Tenakee and Juneau cavers. Again this effort will be self-support.

Net to be outdone, Jim Baichtal, Thorne Bay Ranger District will have limited funding (apparently much of the USFS Geological monitoring budget was reapportioned to Forestry Sciences Lab this spring) for a limited push of one of the large cave systems such as Zina or partial funding of the KOS 2000 expedition. Details apparently are still being discussed. Plenty of choices for most cavers like me with Attention Deficit Disorder!

If you can remember it, contact any one of these folks or me if you are interested in participating!

Further discussions with Jim Baichtal on April 20, 2000 clarifed where the USFS is currently at in regards to timber unit layout on Kosciusko and Heceta Islands: Jim shared with me some impression maps of the newly created Caves and Karst GIS map layer for Kosciusko digitized this fall and spring by Dames and Moore. Taken in part from the field work this consulting firm did during the fall and also from aerial photos, the consultants identified visible karst features evident following clearcut logging of the area 40-50 years ago. These features were added to the GIS layer alongside identified features seen during field reconnaissance of the proposed timber units. Needless to say, the area appears riddled with karst features. This attempt by the USFS to utilize more of a systems' approach to management of the karst is to be applauded and should be required as a better-informed method required by the TLMP Standards and Guidelines to be used in the layout of all timber harvest or other potentially damaging activities over karsted areas throughout the Tongass. In addition to field reconnaissance and the aerial photography work, this GIS layer also includes the results of dye tracing done by Ozark Underground.

The results helped to delineate the southern half of Kosciusko Island into several carbonate blocks, each with distinct drainage patterns.

Hopefully, Jim Baichtal can be convinced to write an article clarifying and expanding on the details of drainage patterns observed based on fluorescent dye recovery, as I do not have the dye traces or the GIS maps in front of me. As I understood it, here is an abbreviated synopsis: Subsurface drains connect the extensive karst east of Cape Pole to Survey Creek, dye injected on the southern flanks of Mt. Francis was recovered from several large springs along the road near Trout Creek, the "Hot Spot" area drains southeastward to a spring which resurges on the coast near Van Sant Creek, a central carbonate block extending from the Kosciusko "international airport" area appears to drain to Carwash Creek and may be an extensive recharge area that provides water to the community of Edna Bay. Interestingly, the dye from this latter trace crossed an apparent surface drainage divide—a ridge between the injection and recovery points. Dye travel times were some of the fastest rates that Tom Aley has ever reported, moving down system as quickly as approximately a mile per day. This indicates that a direct, "main drain" probably exists beneath the caves surveyed to date. Jim has indicated that the hydrologic connectivity and density of surface features will likely eliminate these entire carbonate blocks from the timber base and has expressed the hope that the watershed to the north of Edna Bay can further be delineated for a set aside to protect the community's water supply.

All that remains now is to add cave systems delineated by previous caving expeditions and to double check many features on the grounds. Of course, before the draft EIS will be completed other forest uses and values such as fish and wildlife uses, archeological resources and recreational potential must also be identified. We wish to encourage USFS to keep up the good work, but remind them that Glacier Grotto and TCP would like to be involved with further layout and evaluation.

My discussion with Jim Baichtal then switched to a brief discussion of the modifications to the Rhumba Salvage Sale layout and harvest currently being conducted on Heceta. This discussion resulted in my drafting a letter regarding Salvage

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The Tongass Cave Project An Advocate for Karst Ecosystem Protection in Southeast Alaska
Stephen W. Lewis, Tongass Cave Project and USDA, Forest Service, Thorne Bay RD.

ABSTRACT The Tongass Cave Project (TCP), an official project of the National Speleological Society established in 1991, engages in the discovery, exploration, survey, conservation, and study of the karst and caves of Southeast Alaska. As advocates for karst ecosystem protection on the Tongass National Forest, cavers with TCP have volunteered well over 40,000 hours on the Ketchikan Area during the past decade. Over 500 caves have been located throughout the Tongass and over 300 caves have now been surveyed and mapped. Karst Standards and Guidelines have been developed and implemented on the Ketchikan Area of the Tongass National Forest. Are these Standards and Guidelines effective? To test this, TCP cavers examined Sawfly Salvage Sale timber harvest units on Heceta Island during 1997. They noted serious problems with implementation of the guidelines. As currently designed, this timber sale will have deleterious effects on the unique Heceta Island karst ecosystem. I discuss the history of the Tongass Cave Project. I describe the Heceta Sawfly Sale and outline steps necessary for the Forest Service to establish effective karst ecosystem protection and to regain the trust of TCP cavers.

INTRODUCTION The Tongass Cave Project (TCP) is an official project of the National Speleological Society (NSS). Established in 1991, the goals of the TCP are to support and engage in the discovery, exploration, survey, conservation, and study of the karst and caves of Southeast Alaska. Cavers have volunteered approximately 40,000 hours with the TCP (and before 1991 with the Glacier Grotto), participating in annual month-long caving expeditions as well as in many shorter expeditions since 1987. The US Forest Service has assisted many of these expeditions by providing logistic support under cooperative cost-share agreements. Over 500 caves have been located throughout the Tongass and over 300 caves have now been surveyed and mapped. Most importantly, with pressure from the TCP, Forest Service staff now consider caves and karst in management plans. Prior to 1988 caves and karst received no consideration. A core group of Alaskan cavers has participated in these expeditions since the very beginning. Participants have also come from other parts of the United States, as well as Russia, Japan, England, Canada, Czechoslovakia, Australia and New Zealand; some returning for several expeditions. TCP cavers have engaged in exchange trips with Russian, New Zealand, and Canadian cavers and other exchanges are in the works.

HISTORY OF THE TONGASS CAVE PROJECT The foundation for the Tongass Cave Project was laid about 187 million years ago when the Alexander Terrane ended its journey from somewhere near present day Australia, colliding with the coast of North America (Aley et al. 1993). Although a few cavers had noted its potential, the caves and spectacular karst topography located within this terrane were virtually unexplored and unappreciated until 1987. This was the year Kevin and Carlene Allred first visited northern Prince of Wales Island. Alternating baby-sitting duties with caving, they discovered and began mapping several spectacular caves including "El Capitan" and "Starlight". Kevin made contacts with the Thorne Bay Ranger District and by 1988 the recreation staff was able to offer a modicum of support for a month-long summer caving expedition. Through the Glacier Grotto of the NSS, Kevin initiated a cost-share agreement between cavers and the Ketchikan Area of the Tongass National Forest which, with modifications, has continued for ten years (Lewis, 1995).

1988 was also the year Congress enacted the Federal Cave Resources Protection Act (FCRPA). This signified a growing national interest in protection of caves and led Alaskan cavers to hope caves could be protected from some of the impacts of the intensive logging occurring on the Tongass. Timber harvest on the Tongass has been especially intense on karst, where well-drained soils often make for large trees (Aley et al. 1993, USDA, Forest Service 1997). In 1989, Kevin Allred was the first to descend 598 foot El Capitan Pit, the deepest known limestone shaft in the United States. Survey in El Capitan Cave was pushed to the immense Alaska Room, extending the known length of the cave to nearly two miles. In addition, many other caves were discovered and mapped. It was clear to cavers that the karst and caves

Continued on next page
of this area were spectacular, important, and threatened. Over the next few years, short expeditions to neighboring islands including Heceta, Dall, Kościusko, Coronation, Baker, and Noyes confirmed karst was well developed in many parts of the Ketchikan Area, not just on northern Prince of Wales Island or on the Thorne Bay Ranger District. During the annual expeditions, cavers continued to check for caves in proposed timber harvest units; frequently discovering them just days before fallers were scheduled to begin work. This was frustrating to all concerned; layout crews, sale administrators, and especially to cavers who had little opportunity to protect the resource. In 1991, three years after enactment of the FCRPA, the first buffer was placed around a cave entrance. This was a 100-foot no cut zone around the entrance to "Captain Soup" a highly decorated and fragile cave. The unit around the buffer was soon harvested and within a year most of the trees in the buffer had blown down. Soil disturbance caused by roots being torn from the ground was probably even more damaging to the cave than careful clearcutting would have been. This demonstrated the necessity for windfirm buffers.

The Tongass Cave Project was established in 1991, a year that finally saw cavers focus just on caving rather than on a combination of caving and harvest unit inventory. TCP and the Forest Service both realized that this change would encourage continued volunteer participation. Long-time Alaskan cavers formed the Karst Research Group, a firm which contracted with the Forest Service to inventory karst in the Central Prince of Wales (timber harvest) Project Area. During the early 1990's, Kevin Allred told Dr. Tim Heaton, a paleontologist at the University of South Dakota, about bones he had discovered in El Capitan and other caves. Tim secured funding to conduct systematic excavations and radiocarbon dating. He determined the bear bones dated to over 11,000 years BP and a marmot tooth dated to over 44,000 years BP. Black and brown bears lived in sympathy less than 10,000 years ago. Only black bears now occur on Prince of Wales Island. TCP cavers have continued to locate bone deposits. Paleontological and archaeological work by Tim Heaton and Dr. Jim Dixon, an archaeologist at the Denver Museum of Natural History is continuing (Dixon et al. 1997, Heaton 1995a, 1995b, 1996, and Heaton et al. 1996). Caves are the only sites in Southeast Alaska where bones of this antiquity are well preserved. The finds at these sites have important implications for theories of glacial advance, climate change and human migration.

Kent Carlson began studies of Tongass cavernicolous invertebrates in the early 1990's as well. Working in conjunction with TCP expeditions and with some financial support from the Forest Service, he collected invertebrates from caves throughout the Ketchikan Area. He discovered a number of new species and range extensions (Carlson 1994, 1996, this volume) during three summers of fieldwork. 1993 was important for karst and cave protection in the Tongass. In February, the Ketchikan Area, in cooperation with the American Cave Conservation Association, the NSS, and TCP organized a Karst Management Symposium. They brought in outside experts to educate Forest Service managers, timber industry personnel, cavers, environmentalists, and the public on the basics of karst hydrology, biology, and management. These experts emphasized the importance of considering the biological productivity as well as the three-dimensional nature of karst in land management planning. Karstlands tend to support bigger trees and more salmon than do non-carbonate terrains in the Tongass (USDA, Forest Service 1997). Besides providing educational opportunities, the symposium also offered a forum for all participants to interact and discuss karst. The Forest Service decided to fund a Blue Ribbon Panel of karst experts to examine karst of the Ketchikan Area to determine its overall significance and to evaluate management strategies to better protect this resource.

The Blue Ribbon Panelists found the karst of the Ketchikan Area to be significant at both national and international scales (Aley et al. 1993). They suggested that karst resources would be found in other areas of the Tongass and concluded that karst was being degraded by timber harvest, by road location, operation, and construction, and by quarry construction. They noted that karst requires different management strategies than those appropriate for non-carbonate terrains. In the islands of the Tongass this means treating karst as three-dimensional islands within islands. In addition, their analysis

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tion, TCP cavers explored a cave near this recently harvested unit. This unit had been laid out several years ago, just after the Ketchikan Area implemented the Karst Standards and Guidelines. The original plan had been modified just prior to harvest, endangering caves outside the unit. A shovel yarder had been driven between several very large sinks, many of which contained caves. By the time timber had been removed, the edges of these sinks were damaged and in one case a log had been pulled out of a sink, destabilizing its steeply sloping sides. TCP had also been asked to map several caves in or adjacent to Sawfly Salvage units. In the first unit cavers examined, they noted buffers were improperly laid out and were of insufficient width to be windfirm. Optimism faded rapidly.

**KARST STANDARDS AND GUIDELINES AND THE HECETA SAWFLY SALE** Are the Karst Standards and Guidelines working on the Tongass National Forest? To test this, the cavers decided to examine more of the Sawfly Sale Units for compliance with Karst Standards and Guidelines.

Karst Standards and Guidelines require a four-step landscape assessment. First, karstlands are identified. Then, karst features and caves are inventoried. Third, the hydrology of the karst is delineated, and finally, karstlands are classified into one of three categories of vulnerability to disturbance. Throughout this process it is essential to view the karst as a system, not a collection of discrete surface features. It is also important to remember that most caves and caverns have no entrance accessible to humans, but are still sensitive to disturbance. Surface features are clues to the existence of these entrance-less caves. In large areas of contiguous karst it is essential to complete all four of these steps prior to initiating plans for timber harvest. This is the only way to ensure a truly systematic approach to the assessment. There are three classes of vulnerability, high, medium and low. Under current standards and guidelines, low vulnerability karst is generally treated much as non-karst landscapes. Medium vulnerability karst requires some modification of harvest techniques to reduce disturbance, but timber harvest is permitted. Timber harvest is not permitted on high vulnerability karst. Such karst is defined by the presence of any one of a number of features. Lands over caves are by definition, high vulnerability karstlands. All karst on slopes steeper than 72% is classified as high vulnerability. Any watershed draining into high vulnerability karst, even if the watershed is not on carbonate rock, is to be considered high vulnerability and receive the same protective measures. In addition, sinks and epikarst features greater than 8 feet in depth are defined as high vulnerability. Unfortunately wording from preliminary standards and guidelines has been changed so that they now allow harvest within such features if there is no evidence of active water movement.

Karst Standards and Guidelines require windfirm buffers of no less than 100 feet wide around high vulnerability karst. However, according to Thorne Bay Ranger District foresters (personal communication), the width of a buffer must be equal to two tree heights (or over 300 feet for much of the Tongass) in order to be windfirm. No roads are to be built on high vulnerability karst unless there is "no alternative" method to reach less vulnerable areas for harvest.

The Karst Standards and Guidelines emphasize that a systematic approach is essential to adequately protect karstlands. As a rule, features are not isolated, but are parts of a much bigger system. This is especially true for large, contiguous areas of carbonate bedrock such as occur under the Heceta Sawfly Sale. Karst Standards and Guidelines as originally proposed were stronger than those adopted in the new Tongass Land Management Plan (USDA Forest Service 1997). In most instances, "shall" and "will" have been replaced with "should be" and "may be". There are many instances where these guidelines have been further weakened with conditional wording such as "where appropriate" and "to the extent feasible".

While this may give managers greater flexibility, TCP feels that such language leaves too much room for subjective interpretation. This weakens the guidelines, almost to the point of non-existence, in the hands of anyone lacking an understanding of karst and caves and the desire to protect the karst ecosystem. Although a start had been made on all parts of the karst assessment, only two of the four steps had been completed on Heceta before the Forest Service began plans for the Sawfly Salvage Sale. Karstlands had been identified (virtually all the sale area is on Continued on next page
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Karst and a model had been developed to identify areas of higher vulnerability. However, only very preliminary inventory and hydrology work had been completed.

TCP cavers walked all the proposed harvest units and found only a handful, which met Karst Standards and Guidelines. In all cases, buffers around high vulnerability features were only 100 feet wide and, effectively less where they had been measured from the center rather than edge of features. In no case did TCP observe buffers designed to meet the two-tree height definition of windfirm.

In many Sawfly Sale Units, high densities of "dry" epikarst features and sinks greater than 8 feet deep were not treated as high vulnerability karst. Esterson’s dye traces underscore the importance of "dry" features (Esterson 1997). Surface waters will be uncommon except where karstlands abut non-carbonate terrain. Therefore, in large blocks of highly developed karst, almost all features will be dry. Evidence of surface flow will be rare in the interior of extensive karstlands such as those on Heceta. Wording in the Karst Standards and Guidelines needs to be changed to require that all features >8 feet deep be treated as high vulnerability karst unless proven otherwise by dye traces. In several cases, harvest had been planned on slopes steeper than 72%. A number of units drain into high vulnerability features outside the unit with no evident protection for the watershed. All too often features were treated as discrete entities without adequate consideration for the system of which they are a part.

A road was planned and built through high vulnerability karst adjacent to unit 14 even though helicopter logging may have been a viable alternative. The economics of helicopter logging were not applied to this unit, but rather to the sale as a whole (Lewis 1997), a very poor method of determining real viability. More roads are currently being built through high vulnerability karst on Heceta, such as those in Unit 9.

The fact that the Forest Geologist did not meet with TCP cavers at all during the caving expedition exacerbated the entire suite of problems. This was true even though cavers informed him early in the expedition that they had noted serious problems they wished to discuss.

All cavers felt the great majority of the units did not meet Karst Standards and Guidelines, with many units requiring major modifications. This, combined with the lack of communication during the expedition, led cavers to lose confidence in the Forest Service’s commitment to karst and cave protection. Are the Karst Standards and Guidelines working? No, Not Yet.

RESTORING KARST ECOSYSTEM PROTECTION AND REBUILDING TRUST There are a number of ways that the Forest Service can rebuild the trust it once had among cavers. Time must be taken, or made, to communicate honestly and openly with TCP and other cavers. Forest Service personnel must admit problems when they exist and not make promises that can't be kept. Cavers' contributions and concerns must be acknowledged and cavers should be kept in the decision making loop. Most importantly, the Forest Service must implement the original intent of the Karst Standards and Guidelines. When there is any doubt, karst should be considered to be high vulnerability until proven otherwise. In most cases, this should maintain the unique natural processes and productivity of the karst landscape. It will require treating the landscape as a three-dimensional system and taking past mistakes and overall harvest levels into account in designing protective strategies. The role of the cavers and the TCP, as well as Forest Service Karst Specialists, should remain that of advocates for the caves and karst. They should continue crediting the Forest Service for good management practices when deserved and continue effectively and vocally characterizing problems when necessary.

Since the end of the 1997 cost-share expedition, the Forest Service has received many letters from disappointed cavers. During the final weeks of September communication has improved and efforts are in place to reevaluate the Heceta Sawfly Sale. The Forest Geologist plans to spend several weeks on Heceta examining units in person, and plans are being made to bring cavers out to discuss the issues on the ground. (This was done in November 97 ed.) Only time will tell if these plans and promises are meaningful. Unfortunately, as these discussions drag on, road construction continues. It will take serious
12. What is the strangest anchor you have used to get into a cave? Trees, bolts, rocks, nothing out of the ordinary for anchors.

13. What is your favorite caving food? The worst thing you have eaten? My favorite cave food was the dried mango we had on the Kosciusko '98 expedition. When really hungry I've had to eat all kinds of nasty cave food when the bag leaked and everything turned to paste go. Imagine a fused conglomerate of 25% dried pineapple chunks (reconstituted with cave water) + 50% melted and refused Milkduds + 25% horrible smoke flavored dried banana chips, all dusted with a nice layer of spent carbide.

14. What is the funniest thing that ever happened to you in a cave? Or the funniest caving story you have heard? Boy, I have so many funny stories from caving with Steve Lewis. His Slovakian home-built carbide lamp was a constant source of amusement and fear. Like the time we were in a cramped room deep in Moonprobe and he started checking his generator for leaks by waving the lamp flame around the seals. Flames shot out from every seal on that lamp and I thought it was going to explode. Wait this doesn't seem all that funny... Guess you had to be there.

15. What have you forgotten on the way to a cave, inside a cave, or in your surveying gear that made a trip interesting? Have I forgotten anything? No, not that I can remember...

16. Have you ever had an encounter with Skippy the supernatural mouse? Skippy and I go way back. In fact, I was there on Dall when he was caught in a Dorito's bag. Of course that was before his gruesome demise and reincarnation as a covert supernatural vermin agent of evil. [See the April 2000 issue under Steve Lewis's bio for more info on Skippy (ed.)]

17. Have you written any articles for caving journals? Had your picture on the cover of the NSS etc.?? Unfortunately I haven't had time to write much for the NSS News, but would like to get out a feature on the Kosciusko findings sometime soon.

18. Have you been involved with any scientific studies? I'm currently finishing my MS in Geology at FSU and have been dating speleothems from the Yucatan and studying the carbonate dissolution ki-

etics there. I have also conducted a few dye traces on Heceta that were quite interesting.

19. What is it that you enjoy the most about caving? One of the reasons I keep caving is for the exploration and the strange locations that caving takes you to. The fact that cavers are generally such good and humorous people makes it fun as well.

20. Without names or recognizability do you have any stories that show people who should not be caving? People that shouldn't be caving?? Go to TAG and watch any popular cave. Freaks a plenty. I watched one guy try to rappel into Neversink with a homemade figure-8 built out of rusty rebar (who would pay $8 for a real one when you can make it yourself). Another guy told me (as going over the lip of a 225' rappel) that he didn't wear a helmet while rock climbing so why wear one while caving. A guy in Florida once said that he was going to wear his cave diving backplate (picture a big stainless steel plate and webbing harness) into a dry cave for "protection and back support". One idiot even sticked up his first vertical rig with 30lb test fishing line... oh wait, that was me!

21. Anything else? Never look a monkey in the eye

Dave Valentine

This is a summary of Dave's answers: Dave says he has been caving for 5 years and got interested in caving when he attended one of Jim Baichtal slide shows. Even though Dave has caved on POW and has dropped Bear's Plunge he says his favorite kind of caves are "easy ones!" When asked what the most dangerous thing he has done Dave answers "falling Timber!" Unlike many cavers Dave says he has had no weird experiences caving, loves to eat candy bars while caving, hated the tacos that were served on a caving trip, and claims what he has forgotten the most when caving is "how to tie knots." Dave says he has had no encounters with Skippy, and the best thing about caving is "the people you meet." Who the heck has Dave been caving with????
mosaic that stuck out had at least 5 different colors on one side alone, and the roof was covered with multi-colored well-used 3 tab shingles. All the buildings had windows, but few of the windows were glazed with glass, instead most had various types and shades of plastic. But, what caught my eye was a small heard of goats that I soon learned lived outside, and sometimes inside Ralph's house.

As we approached the house a strikingly beautiful black woman stepped out the door. She, like every one we had seen so far, was wearing a collage of fashions that must have spanned time from the 1940's to present. Her plaid knee length skirt looked like something my older sister would have worn in the 60's. She also wore a light pink shirt that showed off her midriff, and over that was an open front white sweater that was missing all its buttons. But what seemed the most out of place was the well worn silver colored high heals that she wore on her feet. Looking at Coulanta's people it was obvious to me that fashion was dictated by what the people found, and what fit. I must also say that even though the clothing was well worn, strange, and even outright weird by our standards, it all was clean.

"This is my wife Laura," Ralph said.

As would be expected Laura shrunk back in shyness as she welcomed us and then as Ralph had earlier asked us to eat dinner with them.

Over the next hour we spoke to Ralph, Coulanta, Laura, and a few others, while Laura cooked a meal over a charcoal fire. Again, almost as if Coulanta had anticipated our question, he explained that they salvaged charcoal that washed into the underground world. And, when they couldn't find charcoal they made it from the abundant wood that always washed in. Coulanta even gave an in-depth explanation of how and where the charcoal was made.

I know by this time you are probably tired of me telling you how surprised I was over this and that. But I must say, that Laura surprised us all with what could only be described as a gourmet meal. First there was roasted goat meat, then chicken, with potatoes, some indescribable vegetable that was very tasty, of course there was some of the heavenly bread that Coulanta had introduced us to and even a desert made from apples that came off dwarf trees that grew right in the village. And to drink, Coulanta talked Rob into brewing some of his Raven's Brew Coffee. To our delight neither Ralph or Laura had ever tasted coffee and they both instantly loved it.

As is often the case after a day of exercise and then a big meal we all were instantly tired. So tired that we were soon sacked out near the goats, but not so near that we had to smell them.

When we woke the next day, Kris decided it was time that we start back for the surface. This he relayed first to us cavers then to a disappointed Coulanta. It was decided that both Coulanta and Ralph would accompany us back to the butterfly room. After a quick breakfast, thanks, and goodbyes to Laura and the others, we started our trek back to a world that was now starting to seem a long, long way away.

Up to this point, I have probably given you more details than I should have, so to expedite this story, I will only highlight what we learned along the way, and not every thing we saw.

Coulanta had taught Ralph the history of the underworld well. Plus, it was obvious that both Coulanta and Ralph were well-read, and they had a good understanding of how our two worlds intermingled. "Our two worlds depend on each other," Ralph said as we walked. "Other than light, nothing gives life more than water, yet to us, it looks like the people of the over world do not understand this." Ralph sounded very serious, and made sure we could all hear him as we walked on.

"Please go on," Kris said.

"Over the years water pollution has forced us to migrate underground all the way from what to you is the southern states to Alaska. We have watched our underground world be totally destroyed by toxins and junk that surface people dumped into to water. Aquifers that were clean and pure as little as a hundred years ago are now destroyed. Yet, you depend on this very water for your survival. Even here in the underground world of Alaska, you dump endless toxins, and debris underground."

Ralph and Coulanta told us of underground areas they had been to that were now full of human waste. Of course they had watched their people die from this pollution, and even worse seen many babies born deformed, some so severely that they could not live. To me Ralph

Continued on page 15
showed karstlands to be critically important to fisheries resources. Later in 1993, TCP appealed the Central Prince of Wales timber sale. The directors felt that it contained inadequate provisions for karst protection. Knowledge gained from the Karst Management Symposium and preliminary findings of the Blue Ribbon Panel led TCP to conclude recommendations made by the Karst Research Group in 1991 were based on inadequate information. Karst needed to be treated as a system, not as an amalgam of discrete features. The appeal was "friendly" and attempted to change minds rather than polarize positions. The Forest Service rejected this appeal. Nevertheless, the Thorne Bay Ranger District implemented most of the requests made in the appeal.

In 1993, TCP cost-share expeditions worked concurrently on northern Prince of Wales Island and far to the south, on the Craig District's Dall Island. Major discoveries were made at both locales. In addition, without Forest Service support, TCP expeditions visited the two other Administrative Areas in the Tongass National Forest. An expedition to Etolin Island in the Stikine Area revealed small but significant pockets of karst. The Forest Service has since provided funding for several other TCP expeditions to examine newly discovered areas of karst and caves in the Stikine Area. An expedition to Chichagof Island in the Chatham Area revealed the presence of very large and spectacular areas of karst and caves. Unfortunately, the Chatham Area has not provided support for further expeditions. In fact, Area management has hardly acknowledged that some of the most significant and spectacular karst and caves in the Tongass occur in the Chatham. In 1994 the Ketchikan Area unilaterally committed to implementing Karst Standards and Guidelines which became the basis for those adopted in TLMP. These guidelines outlined a means of assessing the vulnerability of the karst landscape. The Forest Geologist asserted that the process established in the guidelines was the minimum necessary to meet the requirements of the FCRPA. There have been problems with implementation of these guidelines and dissension within the TCP as to whether they are adequate, even when fully implemented. Nevertheless, they were an important step towards the protection of Tongass karstlands.

TCP cost-share expeditions explored Prince of Wales, Dall, and Heceta islands during the next two years. Major new cave systems were discovered on Heceta. Over 70 caves were discovered in less than six weeks during these expeditions. Many of these caves are over 300 feet deep and several exceed a mile in length. Dye traces funded by the Ketchikan Area, with TCP support, confirmed large areas of the island are hydrologically connected, sometimes unpredictably. In addition, TCP directors disillusioned with what they saw as "business as usual" with Forest Service timber harvest on karst led additional "independent" expeditions on northern Prince of Wales Island. The 10th annual TCP cost-share expedition returned to Heceta Island in 1997. Once again more than 50 new caves were discovered, most of which were mapped. TCP caver and geologist, Kris Esterson undertook dye trace work with support from the NSS and Ozark Underground Laboratory. His traces confirmed large areas of hydrologic connectivity and provided important information about the ability of "dry" features to conduct water and materials rapidly into significant caves and the karst system (Esterson, 1997). Dye was transported from one such feature over 2.5 miles at a minimum rate of 1186 ft/day. Fluorescein from this sink was also detected one-half mile away in Arabica Cave, one of the deepest and longest of the many caves on Heceta Island.

Increasing evidence suggests Heceta Island contains some of the most highly developed and integrated karst on the Tongass. Well over 50% of its karsted lands have been harvested. Nevertheless, the Forest Service recently sold the 15.2 million board foot Heceta Sawfly Salvage Sale (USDA, Forest Service 1996). In 1996, during initial planning for this sale, the Forest Geologist assured TCP cavers that all Karst Standards and Guidelines would be rigorously implemented. Although not sure any harvest at all should be occurring on Heceta karst, cavers arrived for the 1997 expedition in optimistic frames of mind. Karst Standards and Guidelines, as explained to cavers by the Forest Geologist, should have taken care of most of the serious problems cavers envisioned for the Heceta Sawfly Sale. Sadly, this was not to be. Several small salvage units had been harvested on Heceta in 1997, one of which was the Triangle Salvage Sale. During the 1997 expedi
USDA Forest Service
Attn: Roadless
P.O. Box 221090
Salt Lake City, UT 84122

December 3, 1999

To Whom it Concerns,

I am writing to express my support for the Roadless Initiative. It is my sincere belief that the USDA/US Forest Service already has too many roads to maintain. The USDA estimates there is over 380,000 miles of road on our National Forests and Grasslands. To put that into perspective that is the equivalent of circling the Earth more than 15 times. At an estimated cost of 8.4 Billion dollars to just catch up on backlogged road maintenance and reconstruction, how can we Americans afford to build any new roads?

Here is the analogy that I would draw; A person builds a new home, then adds on an addition even though they can't afford the maintenance on the original home. But, they don't stop at the first addition they just keep adding on more and more additions while doing minium maintenance on past construction. To make matters worse one notices that the foundation is eroding away threatening the entire structure. They just go to the bank and borrow more and more money to build more and more additions. This is exactly what the USDA/Forest Service has done. Sooner or later someone is going to have to pay for maintenance, reconstruction, mitigation of soil erosion, mitigation to wildlife habitat, and reconstruction of flora habitat that the roads have damaged. Our generation and past generations have already passed on too many debts to future generations.

Until the USDA/Forest Service figures out how to maintain the current road system, and has a management plan in place for existing roads it is not fiscally responsible to continue building more roads.

Not building more roads will without a doubt have a detrimental effect on many timber dependent communities. However, maintaining the 380,000 miles of roads and mitigating the damage the roads have caused would be a boon to the economy that will more than offset lost timber jobs. Not to mention rejuvenating our National Forests would help restore our Public Lands closer to the pristine environment our forefathers bestowed upon us.

As a long time resident who lives within the Tongass National Forest I believe we have enough roads. If stretched out the roads within the Tongass would reach from my home in Ketchikan to the Florida Keys. Isn’t that enough roads?

Sincerely,

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

This is a new section to the Alaskan Caver, where we will feature various cavers who live or who have caved in Alaska. We are also hoping to learn a little history of our grotto. Your help will be appreciated. (ed.)

Kris Esterson

1. How long have you been caving? I have been caving for a little over ten years now.
2. What was the event that got you interested in caving? While on a family vacation I convinced my parents to stop by Florida Caverns State Park. We took a tour and I saw a poster advertising ‘wild cave tours’. My dad and I returned a few months later with flashlights and those frog giggin’ head lamps you can buy at Wal-mart. We joined the motorbike helmet clad masses on the ‘wild cave tour’ and I was hooked.
3. Where have you caved? I started caving in Florida (we do have several very nice dry caves) and then moved on to the bigger caves in TAG. When I moved to Fairbanks to pursue my BS at UAF I contacted Kevin Allred and got involved in the TCP projects. I have been on a TCP expedition every summer for the last 6 years and have also been caving in Mexico and Belize.
4. What kind of caves have you been in? I’ve been in a wide range of cave types from lava tubes to tropical river caves. I love the challenging wet + vertical nature of our Alaskan caves, but strolling through 50m diameter river caves with white sand beaches isn’t bad either.
5. Do you know any of the history of the Glacier Grotto? I don’t know too much about the Glacier Grotto’s early years, or Pre-Skippian Era. Apparently back in the good old days most of the caving was done on the mainland instead of southeastern AK and I think they used torches and Suunto’s made of stone or something.
6. Have you won / achieved any awards? No, not really. I did build a miniature bridge in a physics competition while in high school. The bridge was to be designed to have the highest possible strength to weight ratio. It won 4th place but instead of giving way slowly it exploded while being loaded by the hydraulic press. It sent balsa wood bits shooting out into the crowd, caused minor injuries, and delayed the competition… That has to count for something!
7. Have you been involved with the Tongass Cave Project? I have been on 6 TCP expeditions. One a year since ’93, I think. I have also been to two Karst and Cave Management Symposia to share TCP’s Tongass karst management concerns with cavers from across the US.
8. Do you know any of the history of the Tongass Cave Project? Kevin and Carlene, Pete, and Steve know the whole story on that.[See Feb.2000 Alaskan Caver, Carlene Allred(ed.)]
9. What was the best day of caving you have had? It is difficult to pin down a single best day of caving. When Eron and I connected Arabica to Big Fatty it was a pretty sweet day. Last summer Dan and I returned to Kosciusko to map three nice caves in three days, so that was probably the best three days of caving I’ve had in awhile.
10. What is the most dangerous thing you have done? Do you have any suggestions for new cavers along this line? The most dangerous thing I have ever done while caving? Hmmmm, once in the bottom of Moonprobe I crawled into a tight fissure passage and when I turned around to come out I saw that I had crawled under the most unstable 1 ton rock I have ever seen. It was shaped like a giant ax blade. I thought my chances of squeezing out past that rock without it falling on me were pretty low, but there was no other way out and it was impossible to brace it. I squeezed under it with extreme care and a pounding heart. Obviously I made it, but hope I never have to do something like that again.
11. Have you had any weird experiences on the way to a cave? Once while caving in Alabama we came across a pair of burned up underwear at the cave’s entrance. We thought little of it as, after all it was Alambama, and we had seen underwear stuffed with chicken feathers outside of another cave that same weekend. The events that led up to the burning of the underwear became apparent as we got further into the cave. A burned up sock, then a blackened pair of pants, a charred shirt, and finally a smashed K-mart flashlight near the back of the cave. Apparently ‘Bubba’ busted his flashlight and had to improvise to light his way out. Good thing the cave wasn’t any longer. Sometimes we find odd things in caves but can you imagine turning a corner to be

Continued on next page
implementation of the original intent of the Karst Standards and Guidelines, including immediate cessation of road construction through high vulnerability karst, and possible renegotiation of the Sawfly Sale contract, to begin to restore TCP’s trust. The goal for the TCP, all cavers and hopefully, for the Forest Service is cooperative stewardship of the karst and caves of the Tongass National Forest, ensuring that these systems and the treasures and secrets they hold are protected for generations to come.

ACKNOWLEDGEMENTS Enormous thanks are due to my fellow cavers and members of the Tongass Cave Project, without whose energy and support none of this work would have been accomplished. I also thank the numerous persons in the Thorne Bay and Craig Ranger Districts who have assisted in many ways to make the annual expeditions work. You know who you are. Thanks also to the USDA Forest Service for providing funding to support the caving expeditions and my participation at this symposium.

(This paper was presented at the 1997 Karst and Caves Symposium in Bellingham)

and is printed in the Symposium Proceedings.


Steve Lewis after ascending out of a Tongass Cave

June 2000 Volume 20 No. 3
Dear Love Child,

The Glacier Grotto does indeed number Love and Valentine among its members. Both are Davids. Picture a biblical David taking on Goliath. Equate this with people who love to cave, who grow lyrical singing it’s rhapsodies. These people will take on anyone who would harm their caves. Unlike in the bible, David does not always win, caves in Alaska are not always protected from ravages. Sometimes it does seem as if protecting caves in the biggest state is like throwing stones at a giant, but perhaps someday love of caves will triumph. Not all the members of the Glacier Grotto have names that reflect their passion, but their love for caving is the heart of the Grotto.

Peace,

Phreatic

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Dear Rope Cutter,

I heard a rumor that your grotto has members with the last names of Love and Valentine. Are you the Grotto of love or what?

Signed,

Love Child, looking for love!

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ROPE CUTTER

The Rope Cutter is a place for cavers to voice their concerns, ideas or gripes. Please send your entries to PO Box 9062, Ketchikan AK 99901 (oops! Make that Ketchikan). The answers and ideas in no way reflect any view of the Grotto as an entity, and may not even represent a sane viewpoint at all. We reserve the right to ignore, gloss over, edit or just plain plagiarize any entry.

Dear Rope Cutter,

I am a TAG* farmer and I can’t help it if my one million cows all pee next to this sinkhole. It’s a natural function, what can it hurt?
Signed What’s the beef?

Dear Say What?
Let me explain a little bit about Karst. Karst is an area of irregular limestone in which dissolution has produced fissures, sinkholes, underground streams & caverns. (Courtesy of the American Heritage Dictionary). What you see is not all above the ground. How would you like to live on the bank of a stream? Downstream from another village. You know they wash their clothes in the stream, they pee in the stream. Think about that village upstream from you. You drink the water from that stream. Now, think of the sinkhole as a stream, cause that’s what it really is. Sure it doesn’t look like a river, it’s just a depression, and I’m not talking about the effect of how you feel when someone is complaining about your cows. I’m talking about how that depression takes all the liquid from a large area and puts it in an underground water system. You can’t see it, but it ends up in the next state where people are getting sick from your cow pee. You’ve been wondering why the water from your well is starting to turn brown. No it’s not rust. It’s from the pig farm two states away. Now you know why your daughter has been taking mud baths, and your son just grunts when you talk to him. Things are never as they seem on the surface. That’s why cavers are deep. So, get out of the dark and get some dependable cows.

* Tennessee, Alabama & Georgia

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Going down in
Dall Island’s
Moonprobe Cave
Photo: By: Kent Carlson

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The Alaskan Caver
logging on Heceta to the new District Ranger in Thorne Bay, Dave Schmid. Welcome Dave! The Glacier Grotto hopes to continue to foster a good working relationship with you and hopes that one of the members of the Glacier Grotto or TCP be contacted to observe during additional layout and harvest, and to aid in additional monitoring. It is my hope that USFS will request such an observer for further work on this and other projects.

Additionally, the Glacier Grotto is hopeful that Jim Baichtal will make the time to continue to write clarifications to the Karst and Cave Standards and Guidelines as promised to the concerned public and in Stephen Kimball's letter in the October 1999 Alaskan Caver. This work is desperately needed if the USFS intends to truly manage and conserve karst landscapes across the Tongass at the ecosystem level. I think that all parties involved would agree that a level of inventory such as has been undertaken on Kosciusko Island should be required. It appears to many of us at the Grotto that Jim Baichtal’s many responsibilities as the Forest-wide geologist have split his time among so many different projects that he does not have enough time to effectively oversee them all. Perhaps because of this, we cavers are not being kept abreast of activities now planned or currently taking place on karst. We are hopeful that the District will appropriate more monies for management of this fragile resource and suggest that maybe it is time to consider hiring a karst specialist for the Tongass. We at the Glacier Grotto look forward to working with the USFS on these and other issues.

If you, the reader, are interested in becoming more involved with any of the Grotto's activities, please contact one of us. We need help in many ways. Off Rope! David Love

Greatest Underground Adventure Continued from page 8 summed it up best. “You are shitting in your own nest.”

About half between the lake room and the butterfly room Coulanta told us that he would like us to take a side trip down a passage that we had walked right by on our way downstream. The side trip took us through our first crawl since we had left the upper passages of Arabica Cave, and for the first time we had to use lights. The temperatures were still warm, but other than that this crawl was like so many we had experienced in Alaska caves. Coulanta lead, followed by Kris, then Rob, then Sergey, then Connie, then finely me, with Ralph taking up the rear. One by one, as each caver was finally able to stand up I heard expletives that could not be printed here. And, when I finally broke into the standing room I saw why, and also let out an expletive that was probably worse than all the others I had heard to this point. We were standing in a room that was full of every kind of logging slash and trash that you could imagine. There was even a discarded logging truck of the 1960’s vintage, and several old 55 gallon drums. But, what caught my eye was a piece of yellow survey tape with black magic marker writing on it that clearly read “Carcass Cave July 1989.” To be continued

"Condonia" a Cave Adapted Invertebrates. Drawing Curtesy: Kent Carlson.
In the last episode, cavers exploring Carrot Pit are being followed by a lurking menace, while our hero Ned Nerd is hopelessly separated and lost.

**NED! NEEEEED!!**

What was that noise?

Julie decides to investigate the sound with her bright flashlight...

**NED, IS THAT YOU?**

Instant panic ensues.

**EEK!**

It's a Monster!

WRAWW!!

Golly, Pop. It pitches off!

**Here it comes!**

Meanwhile, our last hero's headlamp has run out of batteries and he wonders with just a penlight...

**Hellooo! Anyone around?**

Hurry! It's gaining on us!

Quick into this side passage!

After a long time deep disappointment sets in.

"I've got to fix it, this will be my grave."

Is this the end for Rubber Caver?

**Sob! Sob! Sob!**

**MEANWHILE...**

It's boring right through solid rock!

**Sob! Sob! Sob!**

Wahhhh! I'm afraid, Pop!

Ohh, I'll never see Tim or my little girls ever again! Sob!

What do you think, Jan?

I think we should call this the Lunch Room.

To Be Continued
July 5 Years ago: Heading to Heceta Island

Photographer Ward Serrill takes a photograph of napping cavers. After a week of intense caving in the Control Lake area of Prince of Whales Island the cavers take a well earned break while they wait on the Naukati dock for a Forest Service employee to take them to Heceta Island. From left to right Ward, Eron Gisberg, two unidentified cavers, Shun Go sitting hunched over and Marcel LaPerriere.

Photo by: Kris Esterson

Rubber Caver

As a fund raising event for the grotto Kevin and Carlene Allred have graciously agreed to let us print a complete volume of ALL the Rubber Caver’s. Including the Utah Rubber Caver’s that have never been printed in Alaska. This limited addition Rubber Caver will be available through pre-sales. To reserve your copy please fill out the form below and send it along with $6.00 to:

Glacier Grotto
P.O. Box 9062
Ketchikan, AK 99901

Name: ..........................................................

Address: ................................................................

City: __________________________ State: ___________ Zip: ___________

Phone: __________________________ e-mail __________________________