

January 1980

Alaskan Caver, Volume 5, No. 1, January-February 1980

Richard A. Hall

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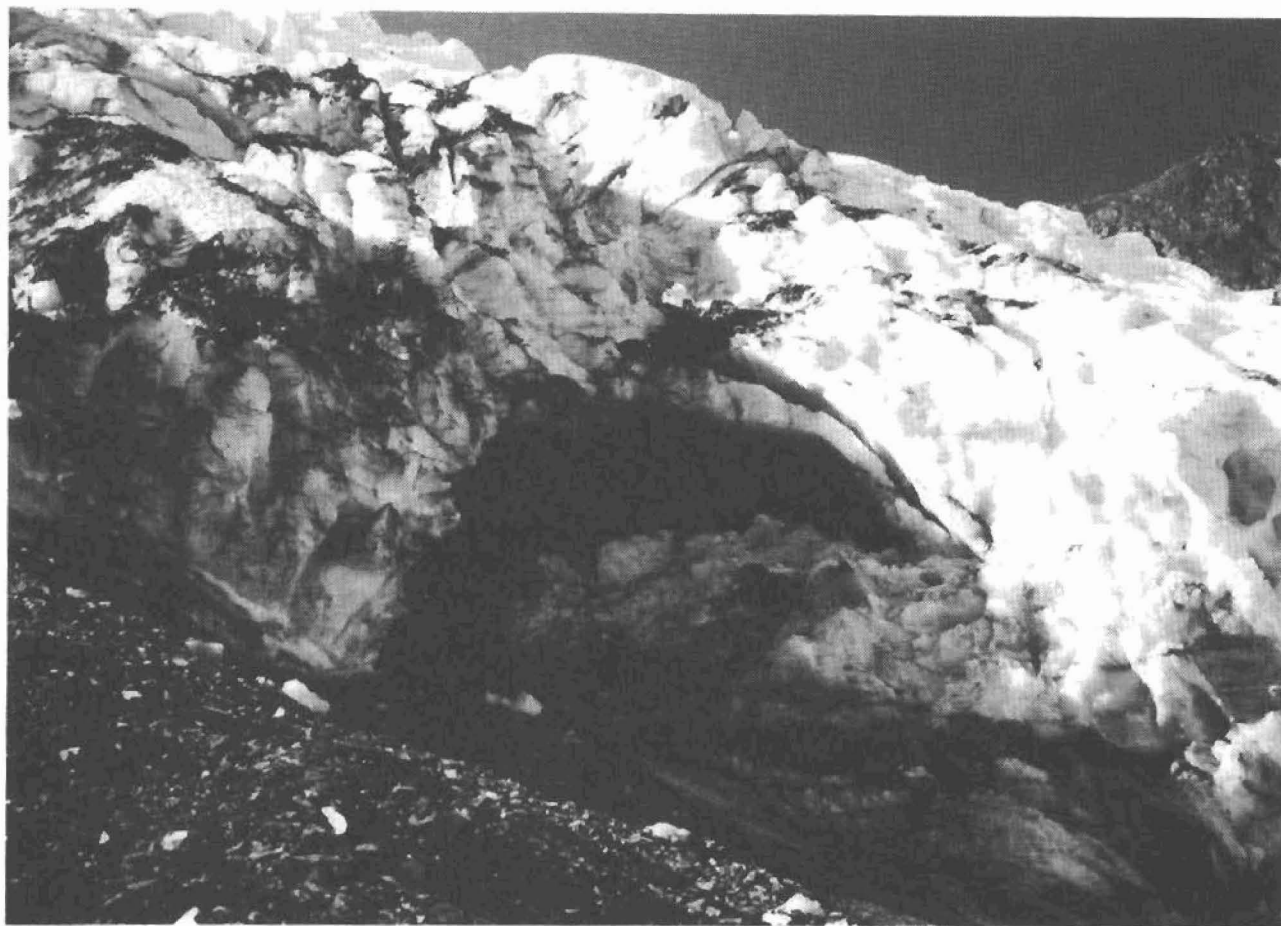
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THE ALASKAN CAVER

Volume 5 Number 1 January - February 1980



Crescent Cave

CALENDAR OF EVENTS

- February 21 Glacier Grotto Meeting Room 212 Grant Hall Alaska Pacific University 7:30 pm There will be a program on caving equipment...Bring your own equipment and catalogs.
- March 20 Glacier Grotto Meeting. The program will be an NSS slide show.
- April 5-6 Cantwell/Caster Glacier Trip sponsored by Fairbanks Mountaineering Club.
- April 2-5 Spring break Chitistone Valley Cave Trip. Joe Head and some friends plan to check out some caves while the water is still frozen.
- April 11-13 American Avalanche Institute of Alaska Seminar at Alaska Pacific University; see page 8 for details.
- April 17 Glacier Grotto Meeting.
- May 15 Glacier Grotto Meeting. There will be a program on vertical caving and climbing using mechanical assenders.
- May 24-26 Gull Rocks seacave joint trip with the Mountaineering Club of Alaska. Trip leader Rich Hall 333-2090.
- June 19 Glacier Grotto Meeting
- June 21-27 Tentative Chitistone Valley cave trip
- July 4-6 Homer/ Katchemak Bay seacave trip. Trip leader is Sydney Jenkins 274-0805.
- July 17 Glacier Grotto Meeting.
- Late July NSS Convention in Minnesota
- August 21 Glacier Grotto Meeting.
- August 24-September 1 Annual Labor Day Chitistone Valley cave trip.

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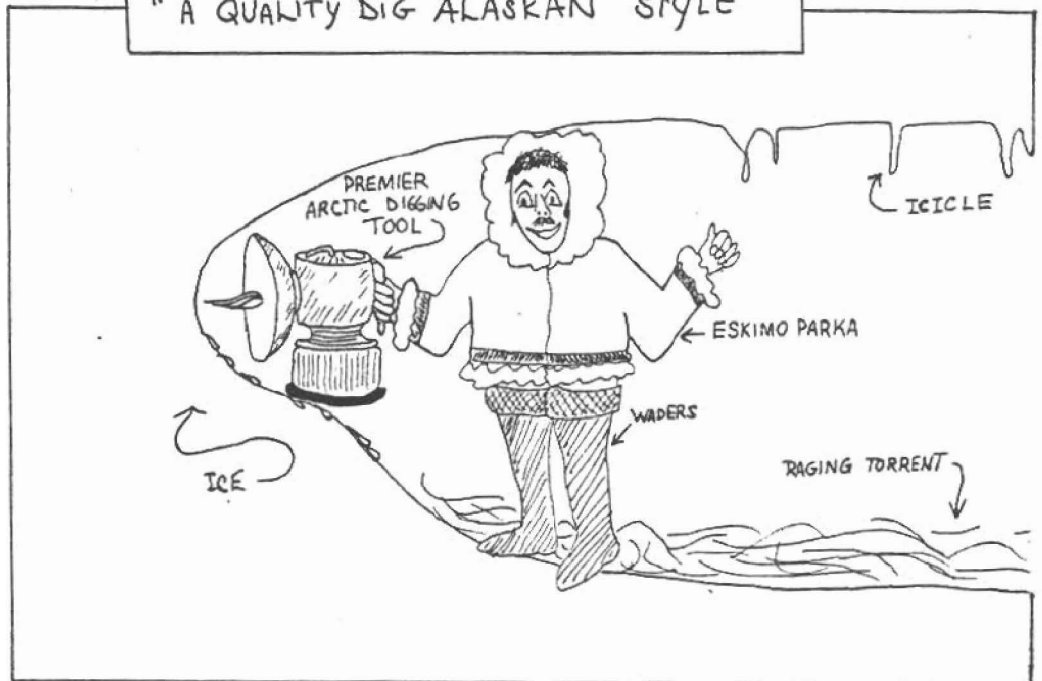
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"A QUALITY DIG ALASKAN STYLE"



GLACIER CAVES

The following is excerpted from 'Glacier Caves', Western Speleological Survey Miscellaneous Series Bulletin # 13, December 1970, by Garry D. McKenzie. The original bulletin includes many references to articles on glacier caves and descriptions of those caves.

A glacier cave is defined by speleologists as a cave formed within or at the base of a glacier. In reference to glacier caves some glaciologists and speleologists have used the ambiguous term 'ice cave'. Although the term 'ice cave' is analogous in construction to sandstone and limestone caves, through popular usage, this term is now used to designate permanent caves in rock formations, in which ice forms and remains far into the summer or throughout the year.

An ablation cave in a glacier is formed by circulating warm air in cavities that may have been formed in part by meltwater streams. These caves are usually formed near the terminus of a glacier where meltwater streams flow from beneath the glacier, or at the margin where lateral streams flow beneath the glacier. In the terminal areas of the glacier, deformation is at a slower rate. Only where the rate of closure of a cave by plastic deformation is less than the ablation by warm air and water will the cave form and remain open. Interconnecting moulin systems and subglacial tunnels are also of the ablation type of glacier cave. The size of such caves is variable and depends in part on the season. Probably the largest cave system explored to date is the Paradise Ice Cave System in Washington. There W.R. Halliday and C.H. Anderson found several kilometers of passages with one chamber 75 meters long, 27m wide and 8m high. The fact that ablation caves melt rapidly during summer makes some of them extremely dangerous during this period. Since portions of the roof could collapse at any time, one should not linger in these caves, and at certain times it is unwise to enter them.

An obstruction cave is formed as the result of interrupted glacier flow due to a bedrock or other subglacial protruberance. Obstruction caves are found near the margins of glaciers, usually in the upper part of the ablation zone and in the accumulation zone. Throughout most of the year entrance to such caves may be impossible without tunneling. Some contain many speleothems during most or all of the year. The size of such caves, which are usually smaller than ablation caves, depends on the rate of closure relative to the velocity of the glacier. These conditions depend on the thickness of the overlying ice, the temperature of the ice, the velocity of the glacier at the cave, and the size and shape of the obstruction. Apparently some parts of an obstruction cave, although originally formed by a subglacial obstruction, may be modified during the summer if the cave is below the accumulation zone. In the terminal zone of a glacier small obstruction cavities may often be the place where erosion by meltwater streams begins to form ablation caves.

ION CAVER

A friend of mine brought me a short article that he found in the December 1979 Playboy magazine; the title was "Go Sit in a Cave". The article referred to recent studies on air quality and the idea that clean air is not enough; you need negative ions in the air, and the more the better. A typical modern office building evidently has only about 100 negative ions per cubic centimeter; typical indoor air has 500 to 1000; and typical outdoor country air has 1000 to 5000. And where do you think was the best place to be? Sorry, it wasn't caves, it was next to a waterfall with 25,000 to 100,000 negative ions per cubic centimeter; but caves came in second with 5000 to 20,000. But as cavers we already know how great the feeling is at the bottom of a waterfall inside your favorite cave.

JAPANESE TEAM EXPLORES ALASKAN GLACIERS

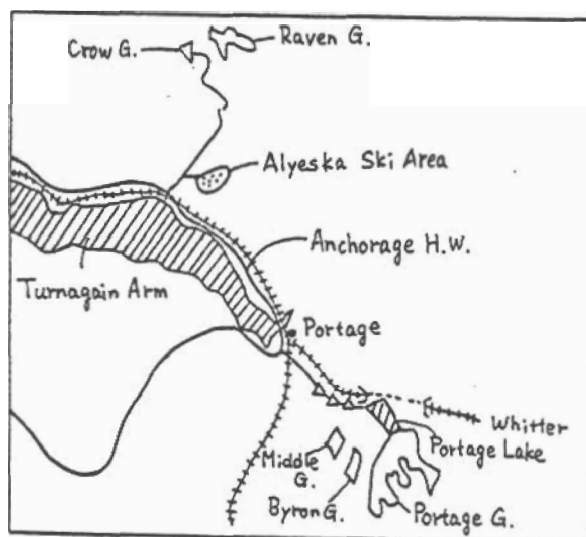
During July 21 to August 11, 1978, nine students from Kwansei Gakuin University Exploration Club of Hyogo, Japan visited Alaska to explore glacier caves. They were intrigued because glaciers are uncommon in Japan. They managed to find and document two previously unreported caves. This article is derived from the English version of their official report.

Although they realized that autumn to early winter is the safest season to study glacier caves, like everyone else, they had to travel when time allowed them. To make up for this seasonal problem they did most of their surveying at night because it was cooler. As they report, "In spite of our effort, many blocks of ice fell. By good fortune, we could finish the activity without any accident". Although their intention was to survey all of the two caves, due to unstable conditions, some passages were only measured visually.

The group consisted of the following club members: Hiroshi Matsuzaki, Chief Leader; Kazup Ikuta, Subleader; Manichiro Iwao, Public Relations; Yoshiaki Takamoto, equipment and medical care; Toshiki Kitano, accountant and provisions; Toyohiro Okuda, surveying; Syuzo Kondo, photography; George Oshima and Takane Fujiki, advisors.

Ice Worms

On a visit the previous year, some members of the club had seen ice worms and one intent of their trip was to take some back to Japan as they were very rare there. They, therefore, brought appropriate tweezers, test tubes, and formalin for their capture and preservation. They found plenty of dark brown, 2cm long, *Mesenchytraeus solifugus* on Byron Glacier. They supposedly come out of the ice at night to feed on pollen and algae.



Crescent Cave

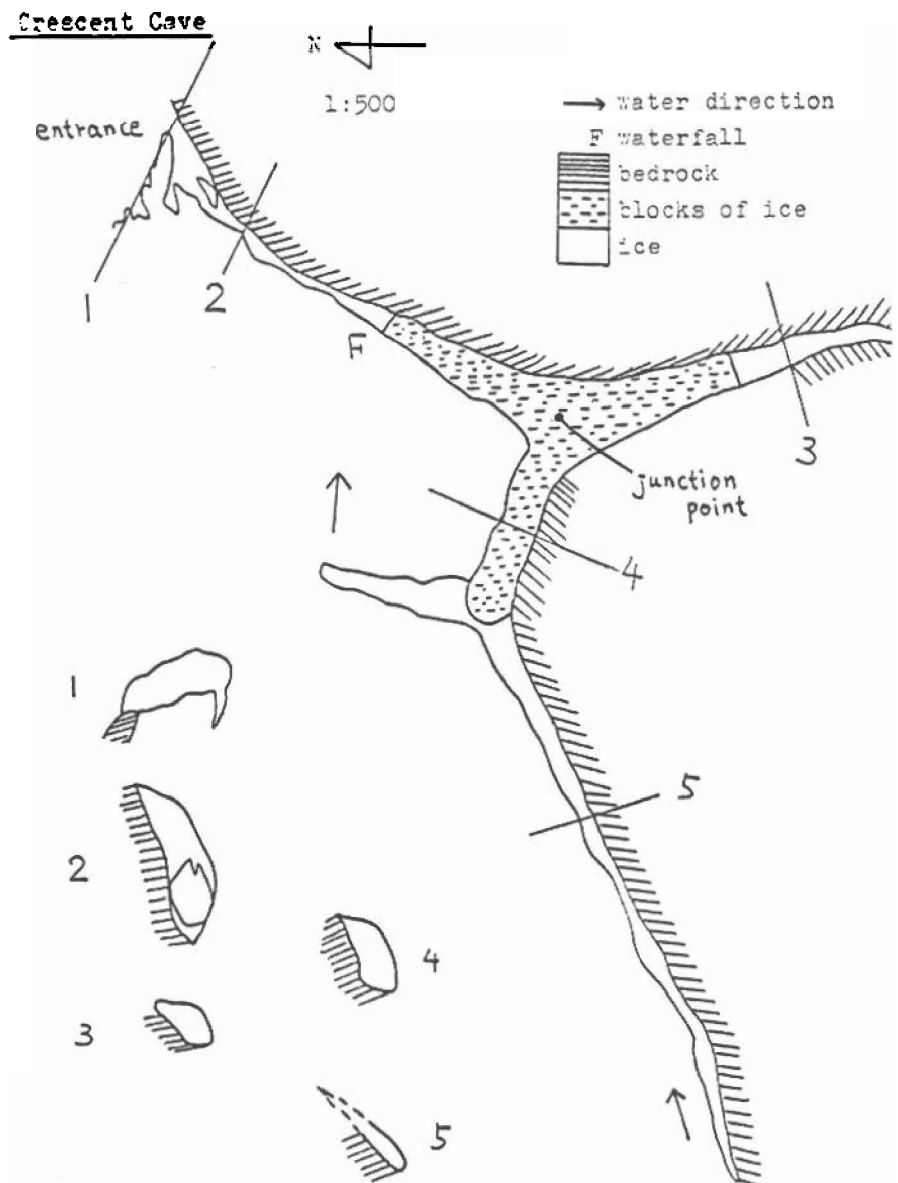
The entrance to Crescent Cave is 10m high and 11m wide above a pile of ice and snow. After climbing up the ice you immediately descend through a narrow opening and down a 35m passage between bedrock and the glacier which opens into a junction room. From this room a passage goes left along the bedrock and another passage goes right between two walls of ice one of which again becomes bedrock. The total length of this obstruction cave was surveyed to be 162m.

To get to this cave, follow the Byron Glacier trail from the back parking lot at Portage Lake and hike the 1.4 mile trail past the two snowfield caves more commonly visited by local cavers and up the glacier from the Byron Glacier Cave entrance.

The Japanese cavers had attempted to enter this cave but found the entrance entirely collapsed. The entrance to Crescent Cave is on the right side of the bedrock protruding well above the Byron Glacier Cave entrance at 1000 feet elevation. The location on the map is USGS Seward D-5 Quadrangle at 60 degrees 45 minutes and 30 seconds West by 148 degrees and 52 minutes North.

Lambuth Cave

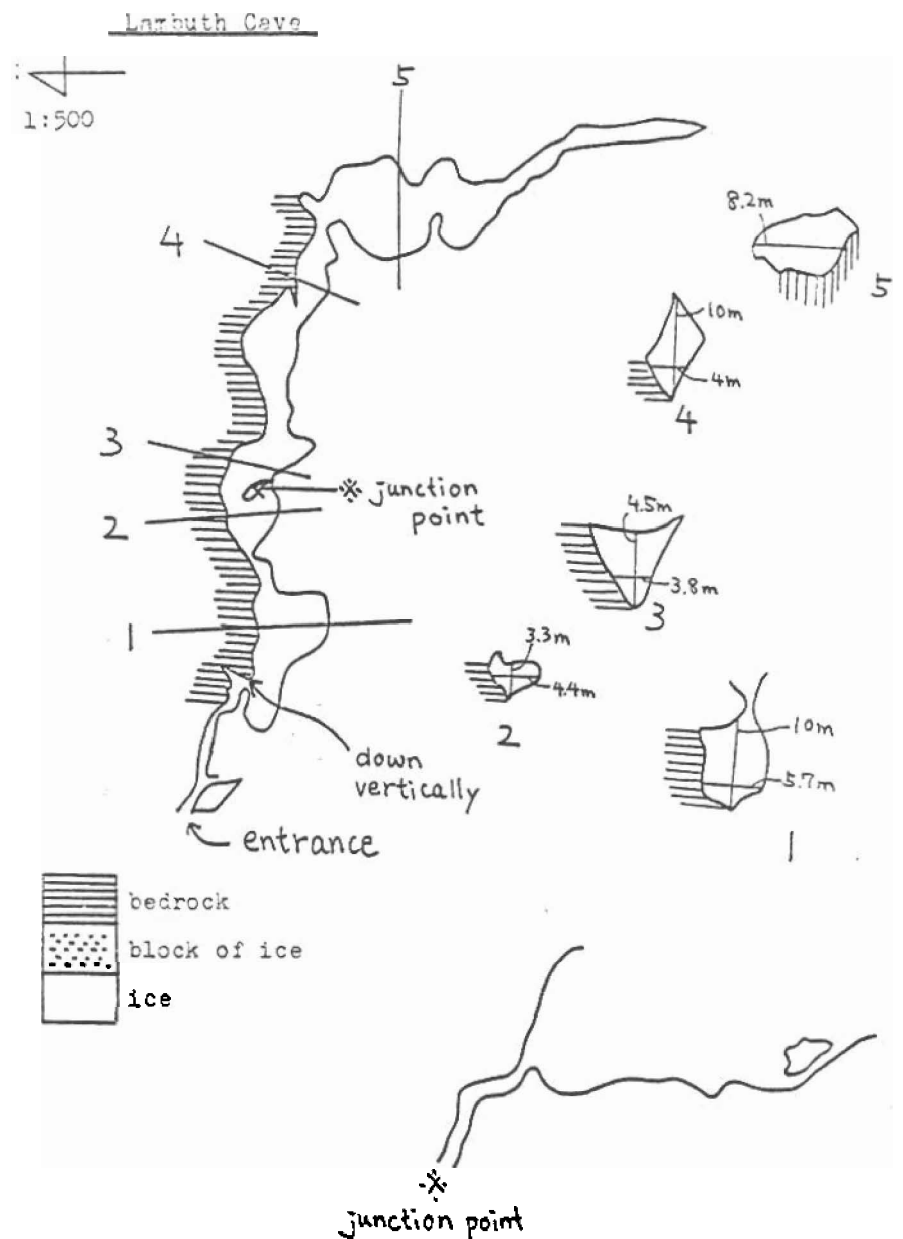
Although they returned to Crescent Cave on several more occasions, usually discovering that conditions were too hazardous, they turned their attention to Crow and Milk Glaciers north of Girdwood. In Crow Glacier they discovered Lambuth Cave which, although it looked like just another crevasse on top, contained 90 plus meters of cave inside. The cave is rather vertical, contained many beautiful speleothems and had two levels of passage. It is created by



an obstruction under the ice pack which leaves a pocket before the ice settles down to bedrock again.

To get to the cave take the road from Alyeska to Crow Pass trail and then 3.5 miles on the trail to the Crystal Lake cabin. A one mile walk up to Crow Glacier from the north side of the lake brings you to a patch of blue ice in the glacier. The entrance is just above the patch of blue ice.

Several members of the club returned during the summer of 1979 but we have not received a report of their trip. A recent letter from Hiroaki Takeuchi however, indicates that they intend to return next year, hopefully at a safer time, with a TV crew to document the trip and would like whatever assistance they can get from our local cavers.



BYRON GLACIER ATTEMPTS

Attempts to enter Byron Glacier caves this winter have failed and we assume the entrances are now snow covered. Most weekends have been too warm or snowy but Larry Blackwood and Rich Hall went down to check the caves on Dec 24 and found three foot of snow over the trail. They managed to get close enough to see that the entrances were still open but had to turn back due to shortage of time and a broken ski bail.

They returned with Jay Rockwell on Jan 1, a beautiful high pressure day with minus 10 degree temperatures, only to find that two more feet of snow had fallen and no one had plowed the road to Byron Lake. They followed a rut made by a four wheel drive which abruptly ended half way in and spent the next two hours turning themselves and three other cars around before they could get out. The only redeeming factor was the sighting of twenty-three moose in the Portage area.

April 11-13, 1980

An intensive three-day seminar dealing with observed, but not widely understood, objective dangers concerning mountains, snow and ice. With the emphasis on glaciers the seminar will be held in Anchorage, Alaska, within sight of some of the great glaciers of North America. Leading mountaineers will draw on their experience to present topics of unusual interest. Ample time will be available for discussion.

An optional one-day basic avalanche characteristics and snow physics course will be offered on April 10 for those interested in a review of the mountain snowpack. This will consist of lectures in the morning and snow pits in the field in the afternoon.

LOCATION

The seminar will be held at the Alaska Pacific University campus at the base of the Chugach Mountains, Anchorage, Alaska.

The one-day refresher course will be held at Girdwood and Mt. Alyeska.

LODGING — TRANSPORTATION

Sleeping bag space in the gym and shower facilities at Alaska Pacific University are included in the tuition. Bring your own sleeping bag and pad. Breakfast, lunch, and dinner are available on campus. Other accommodations are available in Anchorage. Public transportation to APU campus (city bus system) is available from the airport and downtown Anchorage. For out-of-town participants taking the one-day refresher course, transportation to Mt. Alyeska is not provided. However, we will help you to arrange transportation with other participants.

WHERE TO MEET

Out-of-town participants for the one-day course on April 10 register in the afternoon and evening of the 9th in the lobby of Grant Hall, centrally located on the APU campus. Residents of the Anchorage area meet at the Community Hall in Girdwood at 9:00 AM, April 10.

For the Natural Hazards Seminar on April 11-13, meet in the lobby of Grant Hall on April 11 at 9:00 AM.

COLLEGE CREDIT

College credit can be arranged through Alaska Pacific University at time of registration. One credit hour of continuing education credit costs \$40.00. One credit hour of academic credit costs \$75.00.

COST

April 10th, Avalanche Characteristics and Snow Physics Course — \$35.00

April 11th — 13th, Mountaineering/Glacier Natural Hazards Seminar — \$135.00

Request \$35.00 deposit to hold a place. Request full payment by March 20th. In the event of a cancellation before March 20th, your registration money will be refunded less a \$20.00 cancellation fee. In the event of a cancellation after March 20th, all but the deposit will be refunded. Direct correspondence to:

Steve Hackett
American Avalanche Institute-Alaska
Box 595
Girdwood, AK 99587
(907)783-2816

APPLICATION FORM

Name _____

Address _____

City _____

State _____ Zip _____

Phone _____

I will attend

☐ April 10, Avalanche Characteristics and Snow Physics course — \$35.00

☐ April 11 — 13 Mountaineering/Glacier Natural Hazards Seminar — \$135.00

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Amount enclosed _____

American Avalanche Institute
Alaska Association of
Mountain & Wilderness Guides

MOUNTAINEERING/ GLACIER NATURAL HAZARDS SEMINAR

c/o Steve Hackett
American Avalanche Institute-Alaska
Box 595
Girdwood, Alaska 99587
(907)783-2816

DUES ARE DUE

With each new year come tax bills and dues notices. Chances are your taxes will be higher than your Glacier Grotto dues; a mere \$3 for regular members or \$1 for family members. So why not send in your dues now so you can receive the next copy of the Alaskan Caver right away.

Please list member's names below, check off the type of membership, fill in your NSS number and send this form and the money to Sydney Jenkins at Box 4-2917, Anchorage, Alaska 99509. If you want to save 15¢ why not bring it to the next Grotto meeting At 7:30 pm on the third Thursday of each month in room 212, Grant Hall at APU and take in the program as well.

regular	family	NSS#	NSS dues paid?	Name
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MOUNTAINEERING/GLACIER NATURAL HAZARDS SEMINAR

Because of the constant potential for glacier and avalanche problems in Alaska while caving or doing other outdoor activities the following course on natural hazards may be of interest. The curriculum is summarized below and further information and an application form are located on page 7.

April 10: Review of snow properties. Classroom lectures in the morning and snow pits in the field in the afternoon. Course will be held at Girdwood and Mt. Alyeska.

April 11: Snow climates and Glaciers. Snow avalanches in Alaska: mountainous terrain, climatic zones, snow pack conditions, and avalanche distribution. Avalanche accidents and their contributory factors in Mt. McKinley National Park. Route finding in the big mountains of North America.

April 12: The anatomy of glaciers. Judging ice hazards. New developments in equipment and shelters for extreme weather and altitude conditions. Shelter and survival concepts for Alaskan weather, altitude and terrain.

April 13: The fundamental processes in avalanche forecasting. Experimental work on tidal effect as a contributory factor in deep slab and delayed-action avalanche release. High altitude physiology and illnesses.

Glacier Grotto
The Alaskan Caver
Richard Hall, Editor
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Anchorage, Alaska
99504

NEWS - DATED MATERIAL

*Dues are due !
See page 7.*