

DENALI NATIONAL PARK AND PRESERVE

1988 MOUNTAINEERING SUMMARY

For the third consecutive year, a new record was set for the number of mountaineers attempting to climb Mount McKinley. Mild weather and few major storms combined with the increased number of attempts to allow more successful climbers to stand on Mount McKinley's summit this season than during any previous climbing season.

There were three solo winter attempts on Mount McKinley, one successful. Vera Tejas, an Alaskan resident and Mount McKinley guide, became the first person to successfully complete a solo winter ascent and return from the climb. Tejas climbed the West Buttress route, spending nearly a month on the project. He experienced very unsettled weather with day after day of low pressure systems bringing snow and poor visibility. These same low pressure systems also brought unusually mild temperatures to the Alaska Range. Tejas reported the lowest temperature he experienced was about -20F.

The High Latitude Research Project received funding and was in full operation this season. The team continued research into the causes and treatments of high altitude illnesses. This season they concentrated their efforts on three major projects. First they tested a lightweight, portable pressure bag for the treatment of High Altitude Pulmonary Edema (HAPE). The flexible fabric bag needs no oxygen apparatus, can accommodate one person and can be pressurized with a foot pump to simulate a decrease in altitude. Researchers found the bag to be as effective in the treatment of HAPE as low flow oxygen. Secondly, they examined the effect of vasodilation drugs on HAPE victims. Initial testing was quite promising and future study will likely result in an effective medication for HAPE. To date, no drug has proven effective for the emergency treatment of HAPE. Thirdly, researchers examined the neurological basis of Acute Mountain Sickness (AMS). Brain blood flow was measured to examine its role in AMS. Oxygen delivery to the brain appears to be a critical factor. Breathing of either oxygen or low concentrations of carbon dioxide are both effective in high altitude headaches. New techniques allowed measurements of brain blood flow and pulmonary artery pressures using non-invasive instruments.

Despite the record number of climbers on the mountain, there were only 12 search and rescue incidents. Two of these were helicopter hoist operations from the 18,000' level on the Cassin Ridge, where three Korean climbers were evacuated in two separate incidents. The US Army High Altitude Rescue Team flew their Chinook helicopters to conduct the highest hoist operations ever completed by the Army. These were also probably the highest hoist operations ever completed in North America.

The National Park Service conducted three, three week patrols Mount McKinley, as well as numerous patrols into other areas the Alaska Range. We continue to staff a ranger station in the town of Talkeetna where mountaineers register for their expeditions. A strong emphasis is placed upon the importance environmentally sound expeditionary climbing and sanitation techniques. Additionally, mountaineers are encouraged to remain self-sufficient and conduct their own evacuations whenever possible.

(All statistics in this report are for portions of the Alaska Range within the boundaries of Denali National Park and Preserve. Where specifically noted, statistics apply only for Mount McKinley.)

INTERESTING STATISTICS:

Record Number Of Climbers On Mount McKinley: In 1988, new all time records were set for the number of persons attempting to climb Mount McKinley:

1978	=	539
1979	=	533
1980	=	659
1981	=	612
1982	=	696
1983	=	709
1984	=	695
1985	=	645
1986	=	755
1987	=	817
1988	=	916

Success Rate:

- * 562 (61%) of those attempting the summit of Mount McKinley, including 15 to the North Summit, were successful.
- * This is the second consecutive year when no one reached the summit of Mount Foraker.
- * Only two out of the 14 people attempting Mount Hunter reached the summit.

Record Number of Climbers on Mount McKinley during A Given Week:

- * A new all time high of 326 climbers were on the slopes of Mount McKinley for the week ending June 4, 1988.

Acute Mountain Sickness: 103 (11%) had symptoms, of these:

- * 56 (6%) were mild
- * 33 (4%) were moderate
- * 14 (2%) were severe - The High Latitude Research Project reported 12 life threatening cases of HAPE in 1988.

Frostbite: 38 (4%) reported some degree of frostbite. Of these, 7 (1%) required hospitalization.

West Buttress Route: 782 (85%) of the climbers on Mount McKinley were on the popular West Buttress route. This is the highest percentage we have recorded in recent history.

Soloists: 17 persons registered for solo climbs this year. A number of these were able to team up with other groups once they got to the mountain. One soloist disappeared and is presumed to have died on Mount McKinley.

Mountain Guiding: 300 (33%) of the climbers on Mount McKinley traveled with one of the authorized guiding companies. The overall success rate of the guided groups was 63%. The majority of these trips occurred on the West Buttress route, but other guided trips attempted the Muldrow, West Rib, Cassin Ridge, and the South Buttress.

Foreign Climbers: 329 (36%) of the climbers on Mount McKinley were from foreign countries. 21 nationalities were represented:

Austria - 14	Australia - 2	Canada - 31
Chile - 4	France - 26	Germany - 48
Holland - 5	Hong Kong - 5	Hungary - 8
Italy - 5	Japan - 50	Korea - 27
Mexico - 9	Norway - 9	New Zealand - 6
Poland - 3	Russia - 1	Spain - 22
Sweden - 3	Switzerland - 34	UK - 17

Ascent Rates: We continue to see foreign climbers ascend at faster rate than is generally recommended to allow proper acclimatization. This year on the West Buttress route, foreigners averaged 11.25 days to reach the summit, whereas Americans averaged 15 days.

NEW ROUTES AND INTERESTING ASCENTS:

McKinley:

A team of four Americans, Rowan Laver, Randy Waitman, Jim Cancroft, and Chuck Maffei successfully completed the first ascent of the entire length of the Pioneer Ridge. The team spent 34 days round trip from Wonder Lake.

A new variation on the Japanese Ramp leading from the East Fork of the Kahiltna Glacier to the 15,500' level on the South Buttress was completed by Andy Carson, Zack Etheridge, John Chaklos, Chuck Crago and Bill Alexander.

Eye Tooth (9,300' elev. off the Coffee Glacier just south of Moose's Tooth): Tom Bauman and Jack Lewis completed the first ascent of the peak's "Ghost Wall". The climb was completed with 22 pitches in three days.

Mount Dickey: In early July, two Austrians, Andy Ogler and Tommi Bonaface, completed a 51 pitch ascent they called "Winebottle" on the unclimbed East Pillar.

Mount Barille: Ogler and Bonaface also climbed the East Face of Barille in 26 pitches, taking three days.

Little Switzerland: A new route was completed on the East Face of the Royal Tower by Jim Sweeney and Bill McKenna.

ACCIDENTS: The following incidents are the more significant accidents that occurred in 1988:

Fall, broken leg, evacuated by own group: On May 9, 1988, a group of ten Koreans from the Kangweon National University were descending the West Buttress. The group attempted to traverse around Windy Corner during high winds. One rope team slipped and was able to arrest its fall, but in the process, one of the members broke his right ankle. The ankle was splinted by a physician from another expedition and the injured man's team members sledged him down to Base Camp where his air taxi operator flew him back to Talkeetna.

Frostbite, no rescue: On May 9th, three members of a French team departed High Camp for the summit on the West Buttress route. One member left camp with cold feet but after about one hour, felt nothing. Assuming his feet had warmed, he continued on to the summit and returned to camp approximately nine hours later. There, it was discovered he had frostbitten all toes. The toes were thawed in warm water however they again froze during the descent to the research camp the following day. Air evacuation was attempted

but aborted due to poor weather. The group finally skied back to Base Camp under their own power.

Note: This person was wearing Rondenee ski boots without overboots or gaiters. This is inadequate foot protection for the arctic environment on Mount McKinley. The ski descent after the freeze, thaw, and refreeze cycle apparently did no additional damage. This further reinforces our theory that frostbite victims can usually evacuate themselves from the mountain.

Crevasse fall, frostbite, aircraft evacuation: On May 10, a two person team from Hong Kong reached the top of the fixed lines at 16,200' on the West Buttress. Weather was deteriorating so they continued to descend the opposite of the fixed lines to get out of the wind. While cutting a tent platform, one climber lost his pack toward the Peters Glacier. He began a solo descent to retrieve it but slipped and fell into a shallow crevasse. His partner began a descent to help. He carried a rope and axe but was not wearing crampons. He too slipped and fell into the same crevasse. Luckily neither were seriously injured, but with their limited gear, it took them 1 1/2 hours to extricate themselves. Both received frostbitten hands and one also frostbit his feet and suffered a neck injury. They returned to their tent, could not set it up in the high wind, so they used it as a bivy sack for the night. In the morning, one man could not walk due to swollen feet and the neck injuries. The other descended to the 14,200' medical camp for help. The NPS patrol responded and with assistance from others, lowered the injured and hypothermic climber to the research camp. He was later flown out from 14,200' by fixed wing aircraft.

Fall with injuries, helicopter evacuation: A guide for Genet Expeditions was returning from 19,500' on the West Buttress with two clients. The team clipped into a short piece of fixed line just above Denali Pass. As the guide who was travelling last on the rope unclipped from the fixed line, he either snagged his crampons on the hard snow or was pulled off balance by one of his clients. He fell and was unable to arrest, and slid approximately 80' head first into rocks. He received scalp lacerations and what later was determined to be a compression fracture of a cervical vertebrae. With assistance from another guided group, the guide was able to walk back to their camp at 17,200' - He was later evacuated by helicopter from that location along with another Genet Expeditions client that was frostbitten during the following incident.

Exhaustion-hypothermia, fatality; frostbite, evacuation by helicopter: The Chief Guide and three clients of the same Genet Expeditions party had continued to the summit after the party described in the previous incident turned back at 19,500'. At the summit, one of the clients collapsed from exhaustion and quickly developed hypothermia. Conditions were very cold and all other groups had left the upper mountain. By the time the group had assisted the exhausted woman to the 19,500' plateau, she was immobile and incoherent. Temperature was about -20F and the wind was averaging about 20 MPH. Visibility was very poor because blowing snow and failing daylight. The Chief Guide decided to bivouac. He instructed the two remaining clients to prepare a snow trench for shelter while he descended to retrieve additional gear they had cached at the 18,500' level. Shortly thereafter, she became unresponsive. Upon the guide's return, he determined she had no signs of life and was either dead or dying from severe hypothermia. He decided that to save the others in the party, they would have to descend without her. During this incident, one of the clients frostbit his feet. He was evacuated by helicopter from the 17,200' camp.

Twisted knee, helicopter evacuation: On May 23rd, a man was descending the West Buttress at about the 12,000' level. His team members, a Genet Expeditions guided party, were returning from a load carry to 13,800'. The man placed his foot in some deep snow at the same time his rope team members continued to move forward. The rope pulled the man off balance. He fell and severely twisted his knee. Three days later the team reached 14,200'. The man's knee condition was slowly becoming worse. On May 26th, he was flown off the mountain with the Army Chinook Helicopters that were there to conduct another rescue.

Possible heart attack, fixed wing aircraft evacuation: On May 24th, a 52-year-old member of a Genet Expeditions guided party experienced symptoms of a heart attack while descending from 16,000' to the 14,200' level of the West Buttress route. At the medical camp, he was placed on oxygen and given IV fluids. On May 25th, he was flown by Lowell Thomas in a Helio Courier from the 14,200' basin to hospital in Anchorage. Tests later showed the man had suffered from angina-

Perforated ulcer, ground evacuation: On May 24th, a 34 year old man suffered a perforated ulcer while his party was at the 11,000' level on the West Buttress route. He was able to descend without assistance to the 8,700' level. There another expedition assisted the descent by sledding him down to Base Camp. He was flown back to Talkeetna by his air taxi operator.

Reported AMS and frostbite, helicopter evacuation: On May 26th, the Talkeetna Ranger Station received "Mayday" call on CB radio. The reports were broadcast in Korean. Translations were further complicated because the Korean climbers were trying, unsuccessfully, to speak English. Eventually it was determined the reporting party was with another Korean soloist at the 18,000' level of the Cassin Ridge and the soloist was suffering from altitude illness and had frostbitten a "leg" and both hands. The report further stated the soloist was unable to walk and could not use his hands. The two Koreans reporting the incident said they could not lower the man down the route. The US Army High Altitude Rescue Team responded and on May 27th, was able to hoist the Korean from the 18,000' level. Once examined, the extent of the Korean's injuries were far less than reported. The necessity of this operation is questionable. This was the highest hoist operation the US military had ever completed and was probably the highest hoist operation ever completed in North America.

High altitude cerebral edema, stroke, helicopter hoist evacuation: On June 3rd, the same two Koreans that reported the previous rescue began calling for a rescue themselves. Again communications were a major obstacle, both in translations and because the Korean's radio batteries failed early in the rescue. The two climbers reported their position to be 19,500' on the Cassin Ridge. They said one of them could not walk because of imbalance problems. Cerebral edema was suspected, but as the days passed his condition did not change. Weather had prohibited aerial reconnaissance flights. A ground team was organized from the 17,200' camp on the West Buttress. In very poor weather, the team of three pushed to the summit ridge and placed a 600' fixed line. One member descended the full length of the line plus another 200'. From that point, the Korean team could be seen far below. The Koreans had misreported their position. The Koreans eventually descended to the 18,000' level where the Army Chinook helicopters hoisted them off the route in the second and third hoist operations of the season. The ill Korean was taken to the hospital in Anchorage, where a brain scan shows signs of cerebral edema and a small stroke. During the hoist, he also experienced a superficial flash freezing his hands when he removed his gloves to tie into the hoist.

High altitude pulmonary edema, helicopter evacuation: On May 28th, medical personnel at the 14,200' camp on the West Buttress received a report that a female member of a Japanese climbing team, also at the 14,200' level, needed assistance. When the medical personnel questioned the other members of her party, they were told she was all right. The next day, following additional reports that she needed assistance, medical personnel discovered she had severe high altitude pulmonary edema. She was placed on oxygen for nearly three days before she was strong enough to travel on her own. This group was not able to recognize the signs HAPE. In fact, they had left this woman with two other members at the 14,200' area while the rest of the team continued to climb. Both of these people also had HAPE! The woman was evacuated in a Chinook helicopter that was in the area for another rescue.

Avalanche, no serious injuries: On June 4th, a four person climbing team from Italy was descending Kahiltna Pass to the Peters Glacier when they triggered a slab avalanche. Three of the four were caught in the slide. Two were deposited along the edge, while the third was carried about 200 feet where he was swept into a crevasse. The majority of the debris passed over the fortunate climber who was left partially buried and unhurt. The group lost most of its equipment and returned to Base Camp to fly back to Talkeetna.

Search, person not found and presumed dead: On July 10th, solo Spanish climber left Base Camp to climb the West Buttress route. Only several days into the climb, returning expeditions reported the soloist was asking others on the mountain for food and fuel and he appeared to be very poorly equipped for a climb of Mount McKinley. He was seen periodically through July 25th. On July 29th, what are believed to be his tracks were seen departing from Windy Corner (13,100') and ascending the West Buttress Direct. Later search efforts located wind-eroded tracks leading to his tent which was found at the top of the fixed lines on the West Buttress (16,200'). Virtually all of his equipment was still in the tent including stove, fuel, pot and sleeping bag. His pad was found at 17,200', sitting in the middle of the High Camp. It is believed he set off for the summit, travelling without his pack, and never returned. There had been an avalanche above High Camp but to the east of the normal traverse to Denali Pass. No other evidence has been found. Later investigation revealed the man had come to America for an Alaskan adventure. He had not planned, prior to his arrival, to attempt a climb of Mount McKinley nor did he have either the experience or equipment for such an undertaking.

TRENDS AND ITEMS OF SPECIAL CONCERN:

Percentage of foreigners requiring rescues: Foreigners account for 36% of the total number of climbers on Mount McKinley. Twelve persons required some sort of organized rescue effort the year. Seven (58%) were from foreign nations. One of the two fatalities during 1988 was foreign.

Solo ascents: Each year we see more climbers register for solo climbs on Mount McKinley. This year 17 persons registered solo. Some of these were able to team with other expeditions at least to traverse the heavily crevassed portions of the lower glaciers. The following example serves to demonstrate the hazard of solo travel: a guide was returning an ill client to Base Camp, he elected to picket his pack within a previously used camp on the lower glacier, accompany the ill climber to Base Camp and then returned solo to retrieve his pack and continue on to catch up with the rest of his party. When he arrived back to his pack several hours later, it was dangling from the picket into a huge, extremely deep crevasse. The guide swore there was no evidence of the crevasse only hours before.

Increasing use: For the last three years we have had new records set for the number of climbers attempting to climb Mount McKinley. The West Buttress has taken the brunt of this increase. In 1988, climbers spent a total of more than 18,000 user days on Mount McKinley alone! Over 15,000 of them were on the West Buttress. This is approximately the same mountaineering use which occurs annually on Mount Rainier.

For more information, or to request mountaineering information and/or registration forms, please contact me.

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1988 MOUNTAINEERING SUMMARY

<u>MOUNT MCKINLEY</u>	<u>EXPEDITIONS</u>	<u>CLIMBERS</u>	<u>SUCCESSFUL CLIMBERS</u>
West Buttress	146	524	319
West Buttress (guided)	32	258	161
Muldrow	4	12	2
Muldrow (guided)	1	15	14
West Rib	10	25	16
West Rib (guided)	2	14	13
Cassin	7	27	17
Cassin (guided)	1	4	0
South Buttress	4	15	5
South Buttress (guided)	1	9	0
Pioneer Ridge	3	8	4 (N.Pk)
Wickersham Wall	1	5	0
	212	916	551
MOUNT FORAKER	1	2	0
MOUNT HUNTER	5	13	2
MOUNT HUNTINGTON	1	2	0
KAHILTNA DOME	1	5	0
E. KAHILTNA PEAK	1	2	2
MOUNT RUSSELL	1	2	0
MOUNT BROOKS	1	3	3
MOUNT BROOKS (guided)	2	24	10
MOUNT SILVERTHRONE	1	6	0
MOUNT SILVERTHRONE (guided)	1	19	19
MOUNT RAGGED	1	4	4
LITTLE SWITZERLAND	10	43	N/A
GORGE PEAKS	3	5	0
MOUNT DICKEY	1	2	2
MOUNT BARILLE	3	8	6
MOSES TOOTH	4	14	8
MOSES TOOTH (guided)	1	4	0
PEAK 11,300'	4	9	0
MOUNT DAN BEARD	1	4	4

NOTE: Since registration is required only for Mount McKinley and Mount Foraker climbs, statistics for other climbs represent those climbers who voluntarily checked in with the Mountaineering Rangers. Other climbs, especially in the Ruth Glacier area, are likely to have occurred.