another German party on the mountain via Radio Anchorage. They reported that Schumann was at Windy Corner and was being moved down to the 12,800-foot camp site. He had received a 29 mg injection of Lasix earlier but was not improving.

At 6:28 p.m., the Park Service received a call requesting a helicopter evacuation. Akland Helicopters in Talkeetna was contacted. Pilot Jim Okonek and a Bell 206 were readied for the evacuation.

The pickup was made at 12,800 feet at 7:45 p.m. Okonek felt that of his many pickups on the mountain over the years, Schumann was one of the sickest he had seen. However, his recovery on the helicopter descent to Talkeetna was dramatic. Although semiconscious less than an hour earlier, he could walk off the helicopter. He was very weak but declined further medical treatment. (Source: David Buchanan, Park Ranger, Denali National Park)

Analysis

Among the many cases of altitude problems this year, this one—probably pulmonary edema—illustrates that rapid ascent can affect even the experienced climber. (Source: J. Williamson)

PULMONARY AND CEREBRAL EDEMA, FROSTBITE, EXPOSURE, EXHAUSTION, HYPOTHERMIA, PARTY SEPARATED Alaska, Mt. McKinley

A four-man MIKI expedition from Czechoslovakia arrived at McKinley Park on May 29. They checked in with Ranger Bob Gerhard on May 30 before heading for Wonder Lake to begin their climb of Mt. McKinley via the Muldrow/Harper Glacier route. On June 5, they arrived at 6,500 feet on the Muldrow Glacier. Here they left a small red dome tent with extra equipment and one of two small HF radios they carried. A third radio had been left at Eielson Visitor Center for National Park Service (NPS) personnel to monitor. On June 7, camp was moved to 10,600 feet at the base of Karstens Ridge. A storm arrived, and a rest day was taken here. On June 9, camp was moved to beneath Browne's Tower at 15,000 feet.

At this time, one member of the team, Jiri Novotny (33), was feeling poorly. He had very little appetite and was weak and tired. According to the rest of the party, he wanted to go higher, so camp was moved up to 16,000 feet at the base of Sourdough Gully on the Harper Glacier. Another member of the team, Dan Navratil (37) was a dentist serving in the capacity of expedition doctor. He gave Novotny ampicillin (an antibiotic) to treat a possible infection. On the basis of the information he had received from other Czechoslovakian climbers, Navratil believed this would prevent serious altitude problems. After reaching 16,000 feet, Novotny still felt weak and tired and Navratil continued to treat him with ampicillin. The team leader, Jan Mikeska (35), reported that all the members of the group had dark urine.

At noon on June 11, the decision was made to attempt the summit. Novotny still felt poorly and decided to stay in camp. Mikeska reported that he asked Navratil to stay with Novotny while he and Jan Matus (33) went to the summit. Navratil refused, saying it was not necessary to stay with Novotny, and recommended that Novotny continue to take ampicillin every six hours. At this point, Novotny could still walk but could only take liquids. The radio unit they carried was not able to contact Eielson Visitor Center at the prearranged times and was left in the tent. Novotny was left with twenty soups, tea, an orange, dehydrated food, and

a stove. He was told the rest of the team would return from the summit in a day or two and was promised they would get him to the top also.

Mikeska returned to the 16,000-foot camp from the summit around 3 a.m. on June 13. He had separated from his partners just below the summit when they became tired and did not see Matus and Navratil again until he got off the mountain. When he arrived at camp, he asked for a stove and got no response. Novotny was semiconscious; it appeared he had not eaten or used the stove since they left him and had taken only four of the ampicillin they left him. Mikeska tried to give him tea but he could not drink. He was breathing regularly and had no abnormal chest sounds. Mikeska noticed that Novotny's bag was very wet—possibly from urination. He had no idea what had happened to his two partners and decided to wait for them. He made an H in the snow outside the tent using skis and a parka.

On June 14, the NPS made a flyover to check the progress of the remaining two Czech climbers on the mountain—Mikeska and Novotny. Ranger Randy Armstrong was pilot of a Cessna 185 and Ranger Dave Buchanan was observer on the flight. At 16,100 feet, the small tent was spotted. However, its location at the base of the Sourdough Couloir precluded close inspection of the camp. After several passes, one person was observed in the area, but it was impossible to determine if he was signaling for assistance.

Mikeska reported that he reacted slowly as he thought it was a sightseeing flight but that after several passes, he did wave.

On June 15, Mikeska reported no change in Novotny's condition. A solo Austrian climber, Kurte Stowe, arrived at 10:30 a.m. They discussed evacuating Novotny to a lower elevation but decided it would not be possible to get past the Harper Icefall (Karstens Ridge) with Novotny on a litter. Stowe stamped a large sos in the snow near camp. Mikeska thought Navratil and Matus were still looking for him up high.

Another flyover by NPS personnel that day spotted no activity around the tent but did see a solo climber on the glacier 1,000 feet below camp—possibly Stowe. Mikeska reported no aircraft activity that day. At 10:30 p.m., Novotny stopped breathing. Mikeska attempted "heart massage" but was unsuccessful.

Afterwards, Stowe left to try to get help. On June 16, NPS Ranger Bob Gerhard flew to the camp in a Bell 206 from ERA Helicopters. They landed just long enough to pick up Mikeska and check that Novotny was dead. The helicopter was not able to go back to recover Novotny's body at that altitude. Stowe returned on June 17, packed up the equipment left in the camp and wrapped Novotny's body in a sleeping bag. That night, he returned to an American camp—the "Denali Poozle Platoon"—at 14,500 feet. The next day, Stowe continued back up with the American team and, on June 21, he and one other climber reached the summit.

On June 22, a member of the "Poozle Platoon," John Smith, became ill and could not descend beyond the 15,000-foot camp. They radioed out via Radio Fairbanks to the National Park Service and requested an evacuation from 15,000 feet. They offered to bring the body down to their camp for a pick up with Smith. This was completed that morning.

That afternoon an attempt was made by a Bell 222 from ERA Helicopters to pick up Smith and Novotny but was aborted after a hard landing and some damage to the aircraft

On June 23, a Bell 206, chartered from Evergreen Helicopters, picked up both Novotny's body and Smith without incident. Novotny's body was flown to the McKinley Park airstrip where it was transferred to a pickup truck and transported to Healy. The body and all personal effects were turned over to the District Coroner.

As reported earlier, Matus, Navratil and Mikeska left their camp at 16,100 feet on the

Harper Glacier for the summit of Denali on June 11. They stopped, had a meal at Denali Pass and cached most of their bivouac gear there before continuing on to the summit. About 19,300 feet, they passed the bodies of the two German climbers who had perished in a storm two weeks earlier. Mikeska reported that he saw the bodies and Matus thought he might have seen them, while Navratil remembered nothing.

As they crossed the Summit Plateau, both Navratil and Matus were extremely weak and felt they could not continue to the top. They decided that Mikeska should go on alone and that they would descend and wait for him at Denali Pass. They did not realize they were not roped together and, on the descent, lost sight of each other and sat down to sleep.

Meanwhile, at 1:30 a.m. on June 12, Austrian climber Peter Habeler, his partner Michael Meuer, and two German climbers, Herman Glatz and Andreas Hutten, had left the 14,000-foot camp on the West Buttress for the summit. The weather was good and they climbed quickly, reaching Denali Pass at 5:20 a.m. Habeler went on alone above the pass. About fifty feet below the bodies at 19,300 feet, he saw a man in blue sitting in the snow. Although he had a rope around his waist, the other end was free. His gloves where lying in the snow next to him. This was Matus.

"What are you doing here?" Habeler asked. No response. "You must go down," Habeler continued. Matus pointed upward and said only, "Friend up."

Habeler saw something red moving among the rocks near the Archdeacon's Tower and, knowing his partners were continuing up behind him, headed for the spot. Here, Habeler found Navratil. He was in the shadows and it was very cold. As Habeler approached, Navratil turned and smiled at him. He had a rope tied to his waist which was the same color as Matus' only much shorter.

Habeler's first thought was, "This man is going to die." "Let's go down," he said to Navratil. Very calmly and with no willpower, Navratil replied, "I stay here." Habeler could barely lift him out of the rocks and, when he did, Navratil limped very badly. They reached Meuer and Glatz, with Matus, at 7:15 a.m. Habeler realized the situation was very serious and that a helicopter rescue was necessary if the two were to survive.

At 7:45 a.m., Habeler saw a man—Mikeska—near the top of Mt. McKinley but did not associate him with the sick climbers. At 8 a.m. Habeler left the group to descend the Messner Couloir to the only place he was sure he could find a radio—at, 14,000 feet on the West Buttress. He made the descent from above 19,000 feet in 45 minutes without crampons but the only radio he found could not reach anyone.

Meanwhile, Meuer and Glatz had a difficult time descending to Denali Pass with Navratil and Matus. Both Czechs were very uncoordinated and Navratil was deteriorating steadily. Eventually he had to be dragged down. The group reached Denali Pass at 9:30 a.m. after receiving assistance from Alaskan climber Doug Billman. Hutten was sent to 17,000 feet to get a message out.

At 9:30 a.m., a message reached the NPS via Radio Anchorage that there was an emergency at Denali Pass: two climbers had pulmonary edema and were descending to 17,400 feet. The message was relayed by the "Pok-O-Denali Expedition" at 16,000 feet on the West Buttress. A climber descending at 10 a.m. brought word that two climbers with cerebral edema were in trouble and probably could not descend. A party was being organized to go to the scene with a CB radio and another contact was set up.

Billman, an Emergency Medical Technician, diagnosed Navratil as having HAPE, slight cerebral edema and severe dehydration. Matus was edemous and hypothermic. Matus later reported hallucinating and seeing red tents above him that he was trying to reach. At Denali Pass he had to be tied up to prevent him from wandering off.

Billman found the cache at Denali Pass and put Navratil in several bags and attempted to administer fluids. Navratil vomited what looked like coffee grounds and complained of pain in the groin. With some rewarming, the pair seemed to stabilize and fell asleep.

At noon, both woke up and Navratil again seemed to be deteriorating. Billman noted rebound tenderness in his groin, no feeling below his pelvis and severe pain in his back. Billman suspected that Navratil had a possible broken pelvis and internal injuries.

About 1:30 p.m., Billman reported seeing a lone climber descending from the summit area whom he met just above the sick climbers at the pass. The man, Mikeska, was limping and seemed to understand Billman who pointed to his friends below. Mikeska made no sign of recognition, seemed to avoid the scene and headed for the cache at Denali Pass. He put on skis at the pass and headed down the Harper Glacier. Mikeska later reported that he had met an American climber with a radio but thought that everything was OK.

At 2:30 p.m., with no news from below, Meuer and Glatz decided to descend for help. At 3 p.m., they reached the high camp at 17,200 feet and radioed the latest developments to the NPS. The Rescue Coordination Center in Anchorage was notified and a high altitude evacuation requested. A C-130 was diverted from a training mission to coordinate communications on the mountain while an Army Chinook was readied for the mission.

At 7 p.m., Navratil began to deteriorate rapidly as the air temperature dropped. Assistance was requested and sleeping bags with heat packs were dropped from the C-130. Billman felt these probably saved Navratil's life.

The Army Chinook arrived at Denali Pass around 9:30 p.m. The helicopter spent forty minutes on the ground at Denali Pass and ran out of O2 before the pickup was completed.

At the Alaska Hospital in Anchorage, the two were examined by Dr. Peter Hackett. Both had cerebral edema and suffered from frostbitten fingers and toes. (Source: David Buchanan, Park Ranger, Denali National Park)

CEREBRAL EDEMA, FROSTBITE, INADEQUATE EQUIPMENT (FOOD), BAD WEATHER, SLIP ON ICE

Alaska, Mt. McKinley

On June 8, 1980, Simon McCartney (24) and Jack Roberts began a climb on the Southwest Face of Mt. McKinley from the northeast fork of the Kahiltna Glacier. They took one week's food for the climb. On June 15, they ran out of food at 17,700 feet while climbing the major snowfield, known as the Clod Face. Both felt very fit at this point in the climb and, with the technical difficulties of the new route behind them, they decided to continue to the summit.

The next day they reached the Cassin Ridge at an elevation of about 19,500 feet. McCartney had some headaches on the climb to the Cassin and noticed a lack of coordination and balance upon arrival. They set up a camp at this point. Over the next two days McCartney's condition deteriorated and they were unable to continue the climb. These were their third and fourth days without food.

On June 19 two climbers on the Cassin, Mike Helms and Bob Kandiko, reached the campsite a 2 p.m. Kandiko reported that McCartney was semiconscious and had a body temperature of 96°F. The decision was made that Kandiko would stay with McCartney while Helms and Roberts climbed the rest of the Cassin and descended the West Buttress for