20's), who had fallen into a crevasse by walking off a cornice during whiteout conditions. She indicated that they were in the vicinity of Camp Muir, having traveled over the Muir Snowfield and past Anvil Rock prior to falling into a crevasse or over a cliff for a distance of 50 meters. She indicated that her climbing partner was unconscious at that time (Monday afternoon). She was unable to provide a location, and early indications were that one of the two was badly injured.

Rangers began making their way to Camp Muir to stage for early morning search operations. Weather conditions on the mountain were adverse, with sustained 70 mph winds gusting up to 90 mph and temperatures down to 23 degrees. A helicopter was placed on standby for morning operations. Early on Tuesday morning, Morund made contact with the park on her cell phone. Questioning by park officials provided critical information that led to identifying their location in the area just below Camp Muir. The rangers were able to locate and extract the two climbers using high angle rescue gear. Both climbers suffered from relatively minor injuries and hypothermia. As they had fallen into the crevasse with their packs on, the two were able to set their tent up, get into their sleeping bags, and even heat up soup. However, the intensity of the storm required them to continuously shovel snow off their tent throughout the night to prevent it from collapsing. An MD 530 helicopter was used to fly the climbers off the mountain.

They were transported to Morton Hospital and subsequently released at 2100. Ranger Glenn Kessler was IC on this operation. (Source: Edited from a report by Chuck Young, Chief Ranger)

Analysis

The climbers fell when they were navigating in very windy whiteout conditions. They said they were following a wanded route when they fell, but in actuality they had failed to make a crucial heading change around 9,200 feet and had wandered off route in a dangerous area. This spot on the Muir Snowfield is an area with no visual reference. They had left for Camp Muir in a storm with stormier weather forecast.

Major contributing factors were a combination of inexperience, severe winter weather, and poor communication. These two were experienced sport climbers but had not spent any significant time in alpine environments. They had overestimated their ability to deal with a harsh winter environment in glaciated terrain. They had no heavy insulating layers when they were found. Brunet and Morund set up their tent on a steep slope underneath the cornice from which they had fallen. The slope was receiving huge amounts of wind-transported snow, but they were unable or unwilling to move out of this very dangerous spot. Therefore, their sleeping bags, stoves and every other piece of equipment were useless because they were thoroughly soaked and frozen. (Source: Edited from a report by Cooper Self, Climbing Ranger)

SEVERE WEATHER — FROSTBITE, HYPOTHERMIA, COMMUNICATION PROBLEMS Washington, Mount Rainier, Ingraham Glacier

On the evening of May 20, a report came into Camp Muir describing a bad scene in which a guided team of twelve (four guides and eight clients) and another group of four guides (different company) were pinned down on the Ingraham Glacier in extremely severe weather. The groups were descending late from a summit climb, while the four guides had gone to dismantle a camp at Ingraham Flats due to the harsh forecast. The weather had gone from rather pleasant in the morning hours to a full on winter storm by 1500, complete with lots of snow, temperatures in the single digits, and winds that averaged 90 mph with top speeds in excess of 110 mph at Camp Muir. Visibility was very bad. The group of four guides with no clients was able to crawl their way back into Muir and relay pertinent info to Climbing Ranger Cooper Self, who was the only NPS employee at Muir at the time. Communication was very difficult between groups in camp and non-existent with the guided teams still on the mountain.

A plan was put together to send a team of four "fresh" guides across the Cowlitz Glacier, staying on route in an effort to look for and assist the unaccounted for teams of guides and clients still on the mountain. During this time, one roped team found its way into the camp of clients, where one client showed signs of severe hypothermia. Efforts began to re-warm this individual in one of the guide service weather ports. The search team of four was forced to turn back only minutes out of Camp Muir due to the extreme conditions. They regrouped and remained on standby should conditions improve at all. Over the next few hours, the rest of the guided teams found their way into Muir. Many of the clients were extremely fatigued and cold, but none had any major medical issues. Two of the guides sustained partial to full thickness frostbite to skin on their fingers and faces. By 2245, everyone was accounted for and safely inside some building, where they all waited inside for the weather to get better. The next day during improved conditions, all involved persons were able to walk themselves off the mountain and get to definitive medical care as needed.

Analysis

Although the storm that was encountered that day was unusual in its severity, it had been forecast. For some reason, this forecast was not relayed with enough urgency to the guided groups, who were subsequently caught in it late in the day. The storm did not hit really hard until between 1300–1400, a time when guided climbs are usually already off the route. The NPS was not contacted right away due to the incorrect thinking that no rangers were at camp.

Had better communication happened, the guide service would not have been out so late on the upper mountain. Search efforts and organization of resources could have been expedited if the NPS had been contacted earlier. It is hard to say if earlier search efforts would have been productive in getting the guided group back into camp earlier and with fewer injuries, but searching in daylight would have been easier than searching in the dark. When the NPS was contacted (about three hours after the first signs of problems), no one knew what was really going on, who was where, or even exactly how many people were still on the mountain from their own guided groups.

With all of the communication problems that happened in conjunction with this event, individual guides have to be commended for dealing with the situation they found themselves in and for getting all their clients back to camp safely. The guides compromised their own safety, exposing themselves to the elements in order to help their clients deal with the storm. They were able to navigate the route in zero visibility and did not let their clients stop moving downhill, even though some of them could not walk by the time they arrived at Camp Muir. The guides giving medical care at Camp Muir also did a great job in preventing further injury to their co-workers and for attending to the hypothermic woman and the other exhausted clients.

Although mountain forecasts can many times be wrong, they should never be taken lightly. A partly cloudy forecast can often become beautiful and sunny, or the forecasted ten mph winds can easily reach 40 mph, but when meteorologists are forecasting large upper level storm events, one can be generally certain some sort of unpleasant weather will happen. This was one of those events. The fact no one was killed and no one sustained permanent injury is a testament to the will and determination of all the people involved. (Source: Edited from a report by Cooper Self, Climbing Ranger)

AVALANCHE, POOR POSITION, IGNORED OBVIOUS POTENTIAL FOR AVALANCHE Washington, Mount Rainier, Ingraham Direct

On the morning of June 5th at 0445, a large avalanche along the Ingraham Direct route was reported to NPS rangers by RMI guides on the Ingraham Glacier around 11,400 feet. Eleven people—a party of three Americans, a party of six Koreans, and two solo climbers, one of whom was a skier—were reported to have been involved in the avalanche. It was reported that five were still partially buried, five had been recovered, and one was still missing.

Rangers Glenn Kessler and Thomas Payne received the report at Camp Muir, whereupon Payne climbed to the scene while Kessler took the role of IC. When Ranger Payne arrived on scene, mountain guides and other members of the parties had recovered ten of the eleven involved climbers. Ranger Payne, along with guides from AAI, RMI, and IMG, assessed the injured climbers while plans were made for evacuation off the mountain.