up and rigid and the broken end was about 12 inches away from the jaws of the belay device. If the self-belay device had broken the rope, the rigid rope should have been behind the device.

It is therefore speculated that the climber was also using an ascender above his belay device. The broken end near the self-belay device showed signs of heat damage consistent with cutting by an ascender. Unlike a self-belay device, an ascender is not designed or intended to absorb a fall—particularly a Factor Two fall. The propensity for ascenders to cut ropes combined with the rope damage which his ropes would have sustained from the first 2000 feet of difficult aid climbing are likely the reasons why the rope broke. The wear to the ropes is substantiated by a diary entry. (Source: Parks Canada Warden Service)

FALL INTO MOAT, CLIMBING UNROPED, POOR POSITION, INEXPERIENCE

Québec, Saint Raymond de Portneuf, Delaney Falls

On January 13, E.F. and E.L. had just finished climbing La Transparente, a 150m waterfall climb on Delaney Falls near St. Raymond de Portneuf. They had both reached the top of the falls by about 1210, and where an easy slope continued upward for another few meters, E.F. unroped and began to walk toward the top.

E.L. collected their equipment before continuing up to meet his partner for lunch. He suddenly noticed he could no longer see or hear his partner and began searching for him. He eventually found a hole in the ice of the slope that he suspected his partner may have fallen into. He could see nothing, but calling into the water rushing into the hole, realized he could communicate with E.F.

E.L. dropped a rope into the hole, and E.F. confirmed he was able to tie into the rope. E.L. was unable, however, to rig an extraction system, and so had to find another way to get to his partner. He descended about five meters and made a hole through the ice, but was still unable to see E.F.

E.L. returned to the top of the climb to attempt to pull the rope from a different direction, again without luck. He returned to the hole he had previously made in the ice, and could now see the rope in it, indicating that E.F. had slipped farther down behind the ice. E.L. realized that some time had passed, that he was unlikely to be able to extricate his partner himself, and that he still had a long snowshoe and drive to get to rescue authorities. He tied his partner off and went off to call the police.

The Québec Police Intervention Group was called to initiate a rescue. At the scene of the accident, the rescuers attempted to raise the victim with the help of a winch connected to the rope which he had previously tied to his seat harness. The technique worked until E.F.'s body apparently jammed.

The police then set up a rope some 15 meters below, where there was a natural hole through the ice. They hoped to try again from there with the help of a sledge hammer and an ax, but as it was late in the day by then and darkness would increase the hazard to rescuers, they postponed further efforts until morning.

It took two days before the police located and recovered the body. At Portneuf Central Hospital, Dr. Céline Cantin could do no more than pronounce E.F. dead at 1400. (Source: Jacques Kirouac (FQME); Marc Bedard, Québec Coroner)

Analysis
This incident attracted a considerable amount of attention in the popular press in Québec, bringing out calls for regulation, mandatory certification of climbers and even the banning of climbing in the area. The strength of these suggested remedies is somewhat out of proportion to the simple steps that might have been taken to avoid the incident in the first place.

Usually, when a significant amount of water is flowing inside or behind a waterfall, it can be seen or heard, and flowing water should warn climbers of thin ice. The victim did not consider the hazard of walking on the ice adequately, and left himself unprotected when he unroped and trusted the crust.

The first step in a crevasse-type accident like this should have been to secure the victim's rope to protect him from falling farther. If E.L. had known some simple crevasse-rescue techniques, he may have been able to extricate his friend or help him climb out and save him. Many climbers in non-glaciated areas never learn these techniques, which is unfortunate, because crevasse rescue practices can be easily adapted for safety in non-glacial situations. (Source: Geoff Powter)

FALL ON ROCK, INADEQUATE PROTECTION

Québec, Mount Saint Hilaire, Dame Noire Route
On May 31, M.L. (33), with six years of climbing experience, and C.M. were attempting Dame Noire (5.8). M.L. was leading in a dihedral, six meters above his second and last placement, and placing protection in a crack system, when his right foot suddenly slipped on some wet moss. His left hand also slipped and he fell off. He had just enough time to push himself away from the rock, but still hit his right and then his left foot against the rock as he dropped.

According to his belayer, M.L. was face-down before being stopped by the rope two meters below the belay station, a total fall of about twelve meters. M.L. tied himself in to the belay system with a sling, rested a few minutes, and then belayed his partner while he retrieved their equipment. M.L. then rappelled to the ground, where C.M. administered first aid and assessed his injuries. He had sustained a fracture of the right foot and a traumatic bursitis of the left ankle. (Source: Jacques Kirouac, FQME)

Analysis
This climb was reportedly well within M.L.'s ability, so he may have pushed his lead out as a result. A six-meter runout is excessive so close to the ground. Fortunately, his top piece held, as C.M. reported that the other chock had nearly fallen out of the crack, as it was held in only by the cable. The injuries may have been lessened or nullified if the leader had placed more protection. (Source: Orvel Miskiw)