maneuvers; rappels in such questionable circumstances should be belayed. In this case the rope also could quite easily have been fixed at the top for a single-line rappel, which could have prevented the accident.

California, Yosemite National Park, Unicorn Peak. On 21 July Tom Luden (16) and a companion had completed short rock climbing routes on Unicorn Peak and Northeast side of Echo Ridge to its summit. The two boys then attempted a high traverse of the North face of Echo Ridge. They carried ropes, but did not find the going difficult except for an occasional hold or two, so they did not rope together. On traversing a high degree snow slope into which they punched foot holds, Luden's footing gave way and he slid rapidly down the slope, hitting rock islands protruding through the snow surface and was turned end over end in somersaults before he could get into a control-slide position or check his speed with his ice axe, which he lost, along with his watch during the slide. Luden rolled and tumbled over three rock areas in the snow before hitting the bottom edge of the snow and stopping. He was helped off the mountain by campers at the lake below who heard the two boys' shouts for aid.

Source: Eugene Hempel; Park Ranger.

Analysis: Climbing party probably too small for safety. Ropes should be used where there is danger, even though the danger exists for only a few moments or at only a few parts of the climb.

California, Yosemite National Park, Lower Yosemite Falls. On August 23 Richard Parsons (21) and friends decided to go rock climbing. They scrambled up car size talus, to the base of the lower Yosemite Falls cliff. The party worked their way up along the talus at the base of the cliff until they were about 100 feet above the Lower Falls pool. They then found a narrow ledge running diagonally up and over the pool. All the climbers but Parsons became scared and did not go far on the ledge and came back to the talus. Parsons continued diagonally up and when he was out on the ledge about 50 feet he tried to come back down. At this point he was well over 100 feet above the talus. He was working his way back down the ledge when he slipped on a sloping water polished area. He turned and caught a small ledge slightly below the ledge, that he had been on, with his fingertips for a second, and then swung out and fell free, face first, for 75 feet. He lit on all fours, his stomach and face.

Huson drove up the falls trail with a pick-up to within 100 yards. From there Huson went up the talus to the injured person. It was determined that the victim was in deep shock and that he had fractures in at least three extremities and possibly head fractures. Huson returned to the pick-up and called for a doctor. Rescue gear and first aid supplies arrived. The victim was placed in a Stokes litter and carried down the talus during which time the doctor radioed to Park headquarters for plasma expanders. The victim arrived at the hospital at 12:10 and was declared dead at 12:30.

Source: David W. Huson.

Analysis: Parsons should not have been on this climb (near the Swedlund route) without being roped up.

California, Yosemite National Park. On 26 September while descending a boulder field with a slope of approximately 45°, Gary Leonard (25) stepped out onto a large boulder about the size of a dining room table. It tipped forward, causing him to jump down the slope. He jumped and ran about 30 feet before he realized that it was hopeless to try to stay under control. He tucked and rolled and slammed into the boulders, trying to protect his head as much as possible.

Source: Gary Leonard.

Analysis: Assuming that the boulder tipping was unavoidable, the only things that could have lessened his injuries would have been heavier boots (he was wearing rock shoes), long pants instead of shorts, and he should have been wearing his hard hat instead of carrying it.

California, Sierra Nevada, Matterhorn Peak. On 11 October Craig Williams (41), Bob Bowen (34), and Clarke Smith (35), all experienced mountaineers, were descending on a sunny day from a successful and uneventful ascent of Matterhorn Peak. This involved a three hour walk on trail and talus and scree to the Saturday night campsite and on Sunday a 2,900-foot climb at first on talus and then a glacier, gradually steepening to about 35° at the base of the North wall. The final pitches are rock, class 2–5, depending on the route. This party took the easiest eastern gully and east face.

The glacier was very hard ice, studded with rocks. Crampons and ice axes were used and a rope carried, but never uncoiled. No hard hats were carried. Feet had to be stamped to get the crampons to bite.

At the top of the glacier, Smith, while traversing to get to an easier place to descend, slipped and started sliding down the glacier. One ineffectual attempt at self arrest was made, but the ice axe was lost (no wrist loop), probably because it was here that he broke his thumb. He came to a stop about 300 feet below, conscious, but bleeding from severe scalp lacerations. Bowen and Williams made him as warm as possible with the clothing on hand, then went down to camp; Williams continuing to Bridgeport for help and Bowen returning with a down jacket and sleeping bag. Luckily the Sheriff was able to call a twin engine Marine Corps helicopter. It arrived and hovered for nearly an hour while the Marine Corps stretcher crew climbed up the steep part of the glacier and roped the victim down. He spent a week in the Bridgeport Hospital.

Source: Clarke S. Smith, Jr.

Analysis: In retrospect, it seems that the climbers should have seen the possible consequences of a slip and been roped, and should have worn hard hats as well.

California, Sierra Nevada, Mt. Owens. On 12 December Donald Gibson (19) and a companion were attempting to climb the east ridge of Mt. Owens (class 4). One had tried twice before and apparently had some knowledge of belaying. The victim refused a belay and attempted