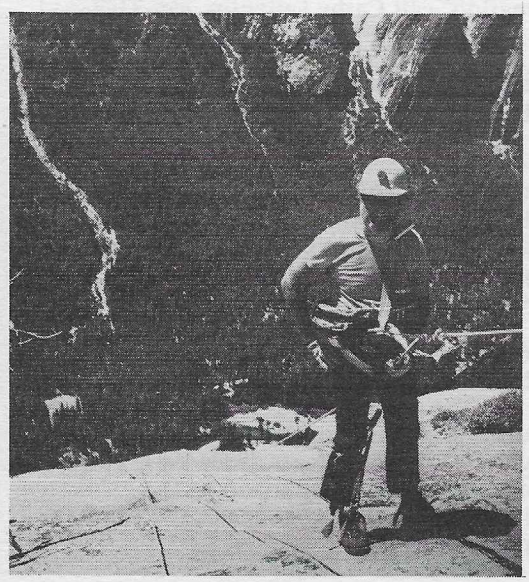
# World Record Rappel Set by NCI Researcher

Everyone has experienced at one time or another certain "highs" and "lows" in life, however, there are few of us who will ever experience living in quite the same way as Dr. Dolph L. Hatfield. A molecular biologist in the National Cancer Institute's Laboratory of Molecular Carcinogenesis, Dr. Hatfield enjoys the challenge of dangling from a rope while rappeling from some of the world's highest peaks or into its deepest pits.

In August, Dr. Hatfield, 43, was one of seven people who rappeled 2,650 feet down the side of El Capitan Mountain in Yosemite National Forest, setting what is considered in rappeling circles a new world's record for performing such a feat with a single rope.



**A forest below appears like small plants as Dr. Hatfield descends.**

The U.S. National Park Service was interested in the expedition's activities because of its implications for rescue operations on a rugged mountain where climbers often need help.

The rope used for the rappel was 4,500-feet long, weighed 300 pounds, and was seven-sixteenths in diameter with an inner core and outer cover of nylon.

It has a factory-tested strength of 7,000 pounds, and is considered to be the longest climbing rope in the world. The rope is owned by Don Belling and Brad Johnson, both of Atlanta, Ga., the expedition's organizers.

Besides the rope, the expedition had several newly designed rappel racks with "break bars," equipment that regulates the speed of descent by controlling the amount of friction on the rope.

The rope is drawn through and over each of the metal "break bars" that can be either moved up or down the rappel rack to regulate how fast a person drops.

The speed at which a person travels along a rope is important because the immense heat generated by the rope rushing through the break bars during a fast rappel could cause the rope to break, according to Dr. Hatfield.

On two previous expeditions, he traveled to Mexico to test his mountaineering skills on its highest peak and its deepest pit, the deepest in the world.

While there, Dr. Hatfield experienced the heat of the jungle and the effects of sub-zero temperatures at high altitude.

Using a standard-designed 1,500-foot rope, he and others lowered themselves over the rocky lip of Sotano de Las Golandrinas or Pit of the Swallows, Mexico's second deepest pit which measures 1,098 feet. It is the third deepest in the world.

"It was beautiful," he said, being able to stop midway on his line to photograph the natural beauty of the thousands of excited swallows and green parrots that inhabit the pit.

His next rappel was into the world's deepest pit, Santo del Barro—1,345 feet deep—discovered in 1973. Later, he scaled Orizaba, an 18,861-foot glacier, the third highest peak on the North American continent.

Dr. Hatfield credits his relatively recent interest in long rappels to his association with fellow "spelunkers" or underground caving devotees.

He shares his interests with his three children, Hugh, 18, Sandra, 16, and Michele, 12, who have accompanied him in exploring dark, cavernous underground areas in West Virginia, and on several of his longer rappels.

There are similar attractions in caving and in rappeling, both inside a cave and outdoors, said Dr. Hatfield, "the natural beauty . . . and going where very few have gone before."

For the El Capitan expedition, 11 additional ground-support people were needed to operate a ground-level base camp and one on top of the mountain.

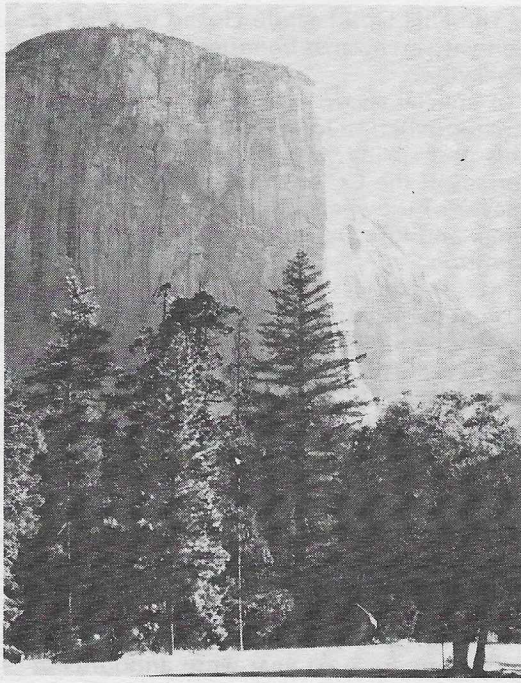
Each person going over the side was equipped with a portable radio to allow constant contact with the base camps. Also from the ground, each man going down the rope was tracked visually through a telescope and a running log was kept on each rappeler.

The heavy rope was hauled up the face of the mountain on the end of a long nylon line dropped from above. As the line was pulled up, it was run through an A-frame that had been constructed on top. It was then passed through a series of three pulleys that were hooked to trees, giving the expedition a four-to-one mechanical advantage over their heavy rope.

Midafternoon on the second day, Dr. Hatfield made his final equipment check and walked backwards, running the rope through his hands, as he got to the edge of El Capitan's Wall of the Early Morning Light.

After completing 1,000 feet of his rappel, he found himself dangling like a puppet on a string in a wind tunnel. The afternoon winds had picked up in velocity and were whipping him a hundred feet from side to side dangerously close to jutting rocks.

His descent took 27 minutes. Despite the wind and the burns on his arms from the hot break bars, Dr. Hatfield was able to photograph the natural beauty that surrounds El Capitan, at an angle most people will never be able to get.

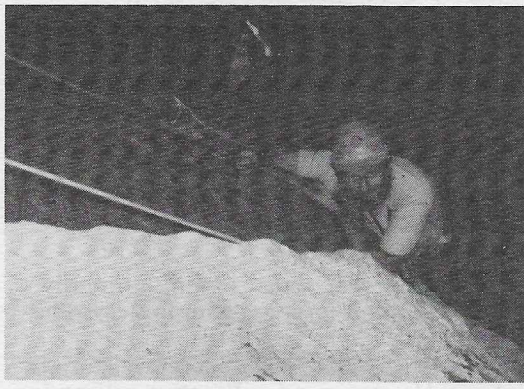


**The rappel point on Yosemite's El Capitan is where Dr. Hatfield began his 2,650-foot descent.**

Safely on the ground, Dr. Hatfield waited 1 day before attempting to climb back up El Capitan. He started back up at around 7 p.m., just as the last of the day's sun was setting behind the mountain.

Night "reclimbs" are preferred by rappelers because a climber expends less energy at night than during the heat of the day.

For the next 8 hours, he climbed in total darkness at about a half a foot at a time, until he got back up to the summit of El Capitan at around 3 a.m.



**A tired Dr. Hatfield ends his 8-hour climb in total darkness up the Wall of Early Morning Light.**

It was a weary Dr. Hatfield, now with newly acquired blisters on his feet, whose fellow climbers helped to the top.

There seems to be no height or depth that Dr. Hatfield will not try in his desire to execute longer rappels. Already, he and several friends are looking at several sites in North and South America where new rappels might be attempted.

Commenting on his interest in rappeling and caving, he says, "It's a great way to know yourself and know your kids better. It's a way to learn about your own limitations, and for your children to learn about theirs." □