

New York and asked him to come on the First American Karakoram Expedition to K2 with us. This meant nearly a six-month commitment of his time: a month to get to India, a month to trek 350 miles in to the mountain, six weeks on the mountain and the same to return, with a little time for emergencies. He gave up his job and was told never to return.

Bill was a magnificent companion on the expedition. He solved the major problem on K2's Abruzzi Ridge by leading a route up a break in a great reddish rock buttress, now known in mountain circles as the House Chimney. The expedition went 4,000 feet higher on K2 than anyone had climbed before, but it did not reach the summit. Bill's climb of the House Chimney has been called by Messner and other major climbers to be the finest climb done at very high altitude before World War II.

In the fall of 1938, New England was struck by a tremendous hurricane that devastated miles of forests. Though Bill had been fired for leaving his job to go on the expedition, on his return he was eagerly welcomed back, and some years later became president of the society.

All his life, Bill was known for his honesty and sound judgment. He loved forestry but, like everyone else his age in 1941, he plunged into Army work, developing clothing and equipment at the Quartermaster General's Office for the 10th Mountain Division and other troops. The development of nylon climbing rope was one of his successes.

At the end of the war he married Elaine Johnson, beginning a very happy marriage in the house they built in Chesham, New Hampshire, with its grand views of Mt. Monadnock. He died peacefully.

ROBERT H. BATES

#### LYMAN SPITZER

1914 - 1997

**O**n March 31, we lost a distinguished astrophysicist and an accomplished mountaineer when Lyman Spitzer died suddenly at his home in Princeton, New Jersey.

Lyman was born in Toledo, Ohio, and obtained a Bachelor's degree in physics from Yale in 1935. After spending a year at Cambridge University, he earned a Doctorate in Astrophysics from Princeton in 1938. Following a year at Harvard, he joined the Yale faculty. During World War II he worked for the U.S. Navy investigating the principles of underwater sound. In 1947, Princeton University invited him to become Chairman of the Department of Astronomy and Director of the Observatory. During the 32 years he held these positions, he joined with Martin Schwarzschild to build one of the country's leading graduate programs in astrophysics. He was elected to the National Academy of Sciences and earned the rare distinction of foreign membership in the Royal Society of London in 1990. He was awarded the National Medal of Sciences in 1980 and the prestigious Crafoord Prize of the Swedish Academy of Sciences in 1985.

His research covered many areas, including the dynamics of star clusters, the physical processes in the gas between stars, and plasma physics. He was a leader in developing magnetic confinement for controlled thermonuclear fusion, and founded the Princeton Plasma Physics Laboratory. In 1946, he published a stimulating paper on "Astronomical Advantages of an Extra-Terrestrial Observatory," which developed the concept of space-based telescopes. He brought these ideas to reality with the development of a 32-inch diameter telescope and associated spectrometer for the Copernicus satellite that NASA launched in 1972. He also led many preliminary studies for the Hubble Space Telescope, and provided much advice to

NASA on its operation.

Lyman began climbing on trips to the Alps and the Tetons. Then, around 1964, through association with colleagues, his climbing entered a more technical phase with weekends in the Shawangunks, trips to the White Sands Missile Range in New Mexico, and in winter on Huntington Ravine on Mt. Washington. In 1965 he participated in an Alpine Club of Canada expedition to Baffin Island. There he climbed Mt. Asgard and made the first ascent of Mt. Thor by the north ridge with Don Morton. Afterward, Lyman walked alone some 32 miles down the Weasel Valley and along the fjord to the town of Pangnirtung in order to return home ahead of the rest of the expedition. In 1967, he joined George Wallerstein and other astronomical colleagues in the Canadian Rocky Mountains east of Prince George, B.C. There he made first ascents of Mt. Walrus, Mt. Petrie, and Mt. Plaskett, the latter two named by the climbers after two prominent Canadian astronomers. Lyman returned to Canada with three Princeton colleagues in 1970 to climb Mt. Waddington from the Tiedemann Glacier.

His later climbing took him to the Dolomites and many places in the United States, including the Flat Irons, Eldorado Canyon, Lumpy Ridge and the Jackson-Johnson route on Hallet's Peak in Colorado, Seneca Rocks in West Virginia, the Needles in South Dakota, White Horse in New Hampshire, and Joshua Tree in California, as well as many routes in the Shawangunks. In 1976, Princeton University authorities were unsettled to find him climbing Cleveland Tower, the high point of the campus. He also climbed extensively with his wife, Doreen, and his four children and their children; to commemorate this bond, his family wore climbing slings at his memorial service. He was a member of the American Alpine Club and the Alpine Club. Lyman will be missed by his numerous colleagues, both astronomers and climbers.

DONALD C. MORTON

# HERBERT N. HULTGREN, M.D.

1917 - 1997

Herb Hultgren arguably made more important contributions to our understanding and management of mountain sickness than anyone in our lifetime. He was my friend and mentor for more than 30 years, and we did some interesting projects together. Herb had a delicious sense of humor not often revealed (though always appropriate). We argued often but usually agreed—and I learned far more than he did from me!

Herb was a giant in the field of mountain medicine and physiology. He knew mountains from his climbs and treks in the Himalayas, Andes, Alps, Rockies and Alaska. He was active in the American Alpine Club for 34 years and a past chairman of its medical committee. He was a dedicated researcher in the basic physiology and the clinical management of mountain sickness. His name is forever linked to High Altitude Pulmonary Edema (HAPE), a very serious problem that has killed many climbers, trekkers and others who went above a moderate altitude—and he knew more about this than anyone living.

He was widely known and respected as a practicing cardiologist and professor: He was Chief of Cardiology at Stanford for 12 years, and for 16 years at the Palo Alto Veterans Affairs Medical Center. In 1990, he was given the Albion W. Hewlett Award at Stanford for “the physician of care and skill who is committed to discovering and using biologic knowledge and wisdom and compassion to return patients to productive lives.”

Herb wrote more than 300 medical articles and book chapters, and spoke at many medical meetings throughout the world. During his last five years, he collected all he knew about altitude in a textbook for doctors. Happily he saw the published book *High Altitude Medicine*