Morgan continued . . .

remember just absorbing the textbook. But my adviser told me that most of the jobs in geology were overseas at that time. Leaving the country didn't appeal to me so I started thinking more seriously about the future. I was taking a basic physical geography class that got me excited about weather and climate. I thought it would be a science that wouldn't require a lot of heavy math, but was surprised later when I got involved studying it. We put up a weather station on campus and I enjoyed reading the instruments and giving weather information to the school newspaper. I did my upper-division work in meteorology at UCLA and after graduating, went into the Army and practiced what I had learned. This stimulated my interest in weather even more, so I came back to UCLA and earned a master's degree in meteorology. I worked as a research meteorologist for seven years and then jumped at the opportunity to go to Stanford University for more education. This time I earned a master's in hydrology, which brought together the two sciences I loved—geology and meteorology.

Q: What kind of advice would you give students considering a career in meteorology?

A: With computers and the basic type of meteorology that is practiced today, you must have a good math background, and especially a good physics background because meteorology is applied physics.

Q: What areas of research are you involved with now?

A: My research is basically studying mountain weather. That's my primary interest and has been for several years. The flow of air currents within the canyons and along the slopes of the mountains is the focus of my most recent research. The two practical applications of this research are determining whether air pollution from the San Joaquin Valley is transported to the Sierra Nevada Mountains and determining the possibility for generating wind power from these currents. So far, my investigations have shown moderate airflow up the canyons and slopes during the afternoon hours. This means pollution from the valley is being ventilated up the slopes of the Sierra. Additional findings indicate that the wind currents during this time of day are strong enough for the local generation of energy by wind power.

Q: How does your research in the mountains relate to your class offerings?

A: I teach two courses relating to mountain environment. One is a classroom experience that I developed over the last eight years, where I am able to use many examples from my research in the Sierra to illustrate points in the course. The other course is a field experience in which I take groups of students into the high Sierra during the summer and give them first-hand experience with mountain weather and other elements of that beautiful country. I have a deep respect for the outdoors and I try to educate my students to appreciate the splendor of the high Sierra, as well as teach them to leave nothing behind but their footprints and take nothing away but pictures and memories.

Q: You have earned the reputation for being able to motivate students to learn about scientific things. How do you do it?

A: I think that students are able to see my own excitement about the subject matter and my desire to involve them and relate the material to their everyday experience. For example, meteorology is rather technical so I start with clouds. A cloud is something that everyone can see and become curious about. How do clouds form? Why did it rain last night? And why did we have that thunderstorm last week? They begin to get interested in what's going on out there. I picture myself as a coach of learning experiences. I'm rooting for all of my students to do their best.

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