

Donald Lee Dahlsten, a professor of insect biology at the University of California, Berkeley, whose work in biological control gave California officials a powerful weapon in their fight against a fast-spreading tree pest, died Wednesday, Sept. 3. He was 69.

Dahlsten died at the Alta Bates Medical Center in Berkeley, Calif., after a two-year battle against a rare type of skin cancer. Over the course of his 40-year career, Dahlsten developed a reputation as one of the world's most respected leaders in biological control, a field that had gained momentum in the 1960s as an alternative to the increasingly ineffective use of chemical pesticides. His research focused on the development of ecologically sensitive methods for controlling insects that feed on trees in forests and in urban environments.

"Dahlsten was a giant in the field of entomology and biological control," said Leonard Brennan, a professor at Texas A&M University's Caesar Kleberg Wildlife Research Institute and one of Dahlsten's former graduate students. "His more than 200 publications form the backbone of the field of biological control. The world is clearly a better place because of his research."

Dahlsten may be best known to the general public for his work on psyllid pests, which attack varieties of eucalyptus trees. In the early 1990s, he found a species of *Psyllaephagus* wasp that effectively killed the blue gum psyllid infesting blue gum eucalyptus trees in nurseries throughout California.

"People had a hard time finding any psyllids two years after the tiny wasp was introduced," said Kent Daane, a cooperative extension specialist in agricultural entomology at UC Berkeley's College of Natural Resources. "It was a classic biocontrol success story."

Dahlsten's expertise was called upon again when the red gum lerp psyllid began attacking and killing California's red gum eucalyptus trees in 1998. He went to Australia and imported another species of the tiny *Psyllaephagus* wasp that destroyed the psyllids by laying eggs within the insects' bodies. The efficacy of the wasp against red gum lerp psyllid is still being evaluated, but it has thus far been most successful in the state's coastal areas.

In addition to his work on psyllids, Dahlsten distinguished himself with his research on the population dynamics of tree-killing bark beetles and the factors that attract their natural enemies. His other projects included research on how the methods used to control Pierce's Disease, which affects grapevines and is spread by the glassy-winged sharpshooter, impacted riparian habitats, and on the ecological impact of the Sudden Oak Death pathogen, a fungus-like algae that has killed tens of thousands of oak trees throughout the state.

He had also maintained one of the largest databases of insectivorous birds in California's forests and riparian areas, and recently contributed a 20-page chapter on the biology of the chestnut-backed chickadee for *Birds of North America*. Dahlsten was still banding birds for study in southern California as late as mid-June with the help of his wife of 38 years, Janet Dahlsten, and his grandson, Joel Smith.

"One of the most powerful operating principles guiding Don was his strong respect for the natural environment," said David Wood, professor emeritus of insect biology and a Professor in the Graduate School at UC Berkeley. "He held an unfailing belief that you could reduce pest-caused damage without the use of pesticides. He worked with an almost religious fervor towards this goal."

According to Janet Dahlsten, he had carried home this respect for nature and aversion to the use of pesticides. "He loved animals - all animals. He wouldn't let me kill a spider," she said. "I had to trap them and let them go outside."

Dahlsten was born on Dec. 8, 1933, in Clay Center, Neb., but moved to Los Angeles with his parents when he was 8 years old. He was a strong athlete and attended UC Santa Barbara on a football scholarship. He had to leave after just one year, however, after contracting polio in 1952.

"Don was one of the toughest individuals I have ever known," said his younger brother, David Dahlsten. "His right arm was paralyzed, and it took several surgeries to get it partly working again. But his reaction to this was to work even harder. It's amazing what the human spirit can do."

The bout with polio shifted Dahlsten's career aspirations from football to science. He enrolled at UCLA before transferring to UC Davis, where he received his bachelor's degree in entomology in 1956. He continued his graduate studies at UC Berkeley, receiving his master's of science and Ph.D. degrees in entomology in 1960 and 1963, respectively.

As a graduate student, he had worked as a research assistant in entomology at UC Berkeley. After he finished his studies, he taught at the Los Angeles State College for one year before coming back to UC Berkeley as an assistant entomologist. He worked his way up to a tenured faculty position by 1969, and from 1981 to 1988, he served as chair of the former Division of Biological Control.

Known as a dedicated educator, Dahlsten was appointed associate dean for instruction and student affairs at UC Berkeley's College of Natural Resources in 1996. He advised 39 graduate students during his tenure, but he also extended his enthusiasm for insects and education beyond the campus by developing and heading outreach programs through the college and through the campus's Interactive University Project.

In the CityBugs program, for instance, Dahlsten and his students teamed up with teachers in the Oakland Unified School District to develop interactive lesson plans on insects for students in grades K-12. In the Environmental Leadership Outreach Program, Dahlsten also helped develop courses in urban environmentalism for Oakland public school students, particularly those in poor or politically disadvantaged communities.

His efforts and outstanding contributions earned him earlier this year the UC Berkeley Distinguished Service Award and the College of Natural Resources Citation.

Dahlsten received numerous other honors throughout his distinguished career, including the UC Berkeley College of Natural Resources Outstanding Teaching Award in 1995. For two years in a row, he was chosen to be a member of a research team visiting the People's Republic of China as part of an exchange program in integrated pest management.

He was also a member of several professional societies, including the Entomological Society of America, the Ecological Society of America, the Society of American Foresters, the National Audubon Society and the Sierra Club.

One of Dahlsten's last honors will be given posthumously in November by the Western Forest Insect Work Conference - the 2003 Founder's Award - in recognition of his contributions to the field of forest entomology.

"Evidence of Don's work and presence seems everywhere in California," said David Rowney, a research associate at Dahlsten's lab and a friend of his for 32 years. "Generations to come will benefit from the reduction in pesticide use that Don accomplished through his successful biological control efforts both in California and around the world."

Dahlsten is survived by his parents, Leonard and Shirley Dahlsten of Los Angeles; his wife, Janet of Berkeley, and her children, Karen Haymaker of Phoenix, Ariz., and Michael Thurston of Auburn, Calif.; Dia Smith of Hollister, Calif., and Andrea Schwipper of Ramona, Calif., his daughters from a previous marriage; his brother, David Dahlsten of Los Angeles; and 10 grandchildren.

Donations can be made in Dahlsten's memory to fund outreach programs benefiting K-12 students. Checks can be sent to the Donald Dahlsten Outreach Fund, c/o the College of Natural Resources, University of California, Berkeley, 101 Giannini Hall, #3100, Berkeley, CA 94720-3100.

*Note: This obituary was written by M. Furniss based on material provided by David and Caroline Wood.*