OBITUARIES

Dr. Jean Pierre (Peter) Vité (1923-2016)

Jean Pierre (Peter) Vité, a renowned forest entomologist and pioneering researcher on bark beetle pheromones, passed away peacefully at his home in Gross Jehser, Germany, on 5 July 2016. We prepared the following as a memorial to a close friend, mentor, and colleague and as a tribute to his remarkable career in forest entomology.

While a graduate student at Oregon State University, I (Bob Gara) had two major professors, a titular one, Dr. Julius Rudinsky, and Dr. Jean Pierre (Peter) Vité, who guided me in research. Right off the bat, the most important research principle Peter left with me was the need to include fantasy and innovation, in that order, in trying to understand biological relations.

At the time I became Peter's graduate student, he was director of the newly established Forest Research Station of The Boyce Thompson Institute for Plant Research (BTI) at Grass Valley, California. During this time, Peter also continued his academic affiliation with the University of Göttingen in Germany. The 324 ha. BTI research forest, dedicated to western bark beetle research, had been the site of the North Star gold mine that closed in 1957. The buildings of the old mine served as labs, bark beetle flight arenas, shelters to prepare field experiments that incorporated flying insects and ponderosa pine samples, offices, and residences. Peter used all these facilities and the BTI forest itself to carry out imaginative studies that fit into his oft-expressed saying, "To understand the behavior of bark beetles and their hosts, you must live with them."

Peter was a strikingly brilliant person who awed me and his other friends and colleagues with his intelligence, foresight,

Dr. Peter Vité at the opening ceremony for the Southern Forest Research Institute in 1963 (Photo courtesy Texas Forestry Association)

and approach to science—all dusted with humor. He was a funny man and a joy to be around. During the spring and summer of 1960, I lived with the Vité family in Grass Valley. At a well-attended supper, I remember his telling of being with the *Wehrmacht* in France about the time World War II was ending. Faced with the challenge of getting back safely to his home in Germany, he picked up a pitchfork, put it over his shoulder, and walked many miles through Allied lines to achieve his goal. I remained surprised that such a perilous tale was told in a way that his family and friends laughed and chuckled for hours. He used these storytelling skills to clearly explain ecological relationships in a manner that conveyed his passion for studying the complex connections between insects and trees. These descriptions culminated in how to create field and laboratory studies aimed at understanding how forest insects find their hosts—bark beetle host selection behavior in particular.

Peter developed ideas on how bark beetles find their hosts together with how these hosts prevented or suppressed beetle attacks. He emphasized that insect and tree responses were regulated by myriad external circumstances, such as the weather, site, tree vigor and attendant defenses, predators and parasitoids, and so forth. On these bases, lab and field studies were designed to pull apart these key interactions so that each could be understood in context with working hypotheses. As crucial bark beetle host selection behaviors and host responses became well defined, bigger pictures would emerge of how bark beetle outbreaks developed and why populations subsequently collapsed. His internationally recognized breakthroughs in identifying the components of bark beetle host selection behavior included applications of innovative experimental plans (fantasy at play). These included insect olfactometers to test the roles of host and insect attractants (pheromones) and host repellents as ascertained by responses of flying bark beetles; electrically driven sampling nets that determined the density of flying bark beetle populations in given areas; tree oleoresin pressure sampling devices that determined the susceptibility or resistance of ponderosa pines to beetle attack; conifer water conduction patterns of various species determined by use of dyes; and many other approaches unique to autecological research.

During the early 1960s, the forest products industry of East Texas was losing large acreages of loblolly and shortleaf pines to outbreaks of the southern pine beetle, *Dendroctonus frontalis*. Cutting and spraying infested trees with insecticides was not solving the problem, and forest industry leaders sought more effective

approaches for dealing with this native bark beetle pest. Impressed with Peter's innovative research on western bark beetles at Grass Valley, a consortium of timber industries asked him and the Boyce Thompson Institute to develop a population management system for the southern pine beetle. In 1963, the Southern Forest Research Institute (SFRI) was established within a pine forest near Beaumont with Peter as Director and Robert Gara as leading scientist for the first three years. The facility included a residence, an office-laboratory and a large warehouse. These arrangements required investigators and staff to live and work with the bark beetles and their hosts, again fulfilling Peter's leading principle on how applied research should be approached.

For the next 11 years, pioneering studies explored how southern pine beetles responded to pheromones and host material and finally how localized outbreaks initiated, spread, and collapsed. Besides field studies dedicated to bark beetles as well as predator and parasitoid behavior, laboratory experiments began to reveal the chemical structures of aggregation pheromones produced by both male and female southern pine beetles. These pheromones were in due course synthesized, marketed, and used in several novel southern pine beetle management strategies.

SFRI research findings have had an impressive impact on how southern pine beetle is managed today. Peter was at the forefront of bark beetle semiochemical research in the 1960s, 1970s, and 1980s. Working with a talented team of entomologists and chemists, his contributions include identification and syntheses of several key southern pine beetle semiochemicals (i.e., frontalin, verbenone, endobrevicomin). These behavioral chemicals continue to offer actual and potential tools for management of both southern and western bark beetle pests. For example, the aggregation pheromone frontalin and host odors are used annually to predict southern pine beetle outbreaks and collapses, based on abundance of bark beetles and native predators caught in frontalin-baited traps. Peter and his SFRI staff were the first to document this relationship.

As another example, the cut-and-leave control tactic, currently used throughout the range of the southern pine beetle in the U.S. and Central America, is based on the attack behavior and infestation growth unique to this bark beetle. Again, SFRI, under Peter's administration, was first to recognize the underlying attack habits and seasonal behavior of southern pine beetles that render cut-and-leave effective for disrupting infestations. More than 50 years later, cut-and-leave remains the most practical control method for treating southern pine beetle outbreaks in the southern U.S. and Central America.

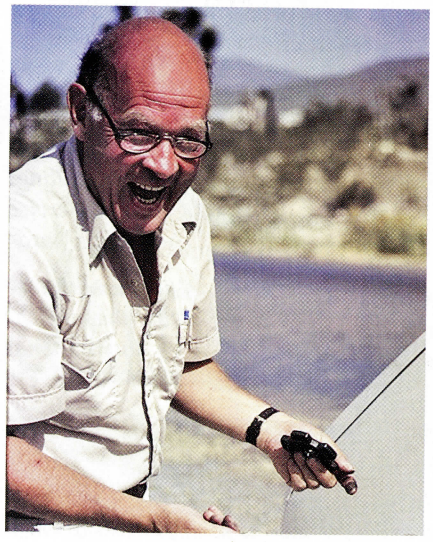
While in Texas, Peter was among the first to conduct research on biological and biochemical variation in southern pine beetles in North and Central America. His contributions in Central America were recognized when bark beetle taxonomist Stephen L. Wood chose the name *Dendroctonus vitei* for a new Central American bark beetle species.

The Southern Forest Research Institute (SFRI) operated until 1974 under Peter's guiding hand. Field staff members varied over the years and several notable forest entomologists and other scientists contributed to the field and laboratory

Dr. Scott Cameron (right) chats with his former major professor Dr. Vité about bark beetle research in East Texas (1985).

On the occasion of its 20th anniversary in 1993, the East Texas Forest Entomology Seminar (of which Peter was a charter member) presented him with a cake and special plaque in recognition of his outstanding contributions to southern pine beetle research.

Peter Vité will be remembered, not only for his many contributions to forest entomology, but for his infectious laugh. (Photos by R. Billings)



research in their early years. No doubt each benefitted from the experience of working with a world-renowned mentor, Dr. Vité. During his career in the U.S., Peter taught forest entomology as a visiting professor at Oregon State University, University of California at Berkeley, and Texas A&M University.

In 1973, shortly before SFRI was disbanded, Peter returned to Germany to assume the position of full professor with a lifetime appointment and Chair of the Forest Zoology Institute at Freiburg University. Here he guided graduate students and conducted research on pheromones of European bark beetles such as *Ips typographus*. When he retired in 1990, Peter moved back to the small town where he was born. He returned often to East Texas to carry out additional research on bark beetles and associated insects as a guest of the Texas Forest Service in Lufkin. His visits were welcomed, his inquisitive mind and spontaneous sense of humor always at the forefront.

He enjoyed trot lining for catfish, hunting ducks, and hosting crawfish boils for family and friends at his cabin situated near the SFRI lab in southeast Texas. His close-knit family consisted of wife Doris and children Yvonne, twins Madeleine and Jeannette, Jean Henri (John), and Jean Nicolas (Nick), and several grandchildren. He was proud that both sons John and Nick graduated from Texas A&M University. In 1969, in recognition of his contributions to addressing the southern pine beetle problem, the State of Texas appointed Peter an honorary citizen.

After 93 years his life came to a quiet end at home in his beloved town of Gross Jehser, Germany, but his legacy lives on in the world of bark beetle research and in forest entomology in general.

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DOI: 10.1093/ae/tmw080

Raymond Edward Ryckman

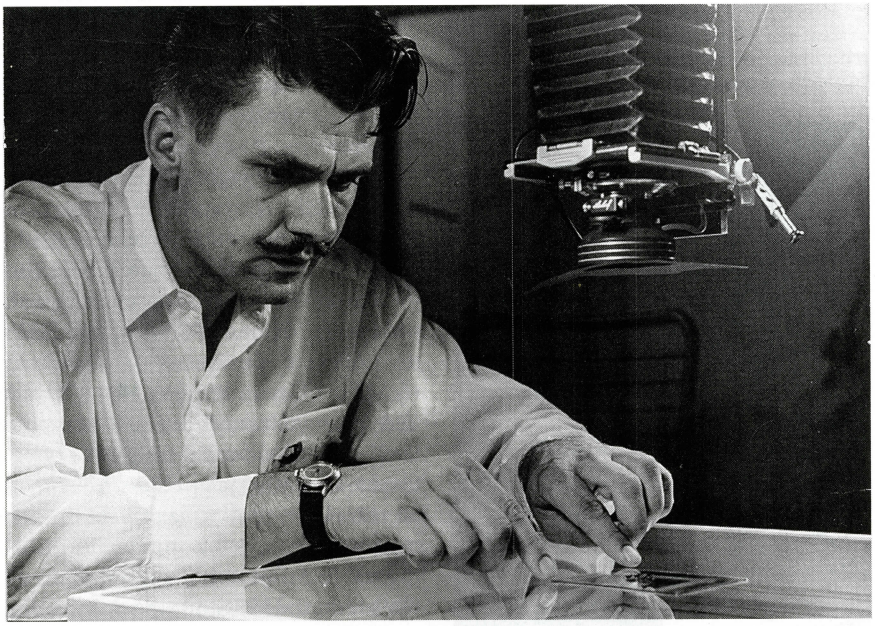
Raymond E. Ryckman was born 19 June 1917 on a southern Wisconsin farm. Fascinated at an early age by insects, he built an observation beehive and was always eager to show the colony to visitors. He was drafted during World War II and served four years at the Presidio Army Base hospital in San Francisco, California. Upon the completion of his B.S. in zoology at UC–Berkeley in 1950, Ryckman was recruited to teach at Loma Linda University, California.

Shortly after arriving at Loma Linda, he was approached by the Army Surgeon General's office to request his assistance in studying the dynamics of plague transmission, in relation to the Army's interest in troop health and safety in Southeast Asia. Ryckman drew from his knowledge of plague ecology in southern California to study squirrel/flea population dynamics and insecticide control. Innovative methods he employed included electric-fence enclosures, ferrets trained to place devices within squirrel burrows, and crucible tongs to gently handle unmanageable squirrels. His research played a major role in understanding the dynamics of plague transmission and control in Southeast Asia.

After the plague grant ended, Ryckman returned to UC–Berkeley, where he completed his master's thesis on Cimicidae (bed bugs) and forged ahead with Ph.D. studies under Dr. Robert Usinger. His research explored the systematics, hybridization, and reproduction of *Triatoma protracta*—vector of *Trypanosoma cruzi*, the agent of Chagas disease. His Ph.D. research was especially admirable, considering that it was accomplished while teaching full-time at Loma Linda University. While at Loma Linda University, he helped start the School of Tropical and Preventive Medicine in 1950. He educated hundreds of medical and graduate students at the School of Medicine at Loma Linda University until his retirement in 1987.

Along with triatomine research, he was a naturalist eager to investigate organisms capturing his interest, generally incidental to studies of triatomines. His career included publications about cactiphilic flies and lizard mites. He continued to write after his retirement, co-authoring a book about Edmund C. Jaeger, a naturalist who studied desert ecology of the southwestern U.S.

Ryckman travelled throughout Central and South America, generally returning with field-collected triatomines to start new colonies. By the time his colony-rearing days were over, he had a collection of dozens of actively managed triatomine colonies in his laboratory. His family frequently travelled with him, and he published several articles with his sons. Ryckman credited his wife with careful and patient review of his manuscripts before submission. Approximately 115 publications were authored or co-authored by Ryckman, the majority of which were single-or two-author publications. His papers constitute a rich library of information about every aspect of triatomine



Dr. Ryckman, at work photographing triatomines.