

**Alvaro Wille Trejos**  
*May 17, 1928-June 11, 2006*

Alvaro Wille Trejos was born of Costa Rican mother, and father of German origin, on May 17, 1928. He spent his early years in a rural environment, surrounded by his family's coffee plantation and large patches of tropical forest. His family remembers that he was fascinated by small animals and began following them even before he could speak. As a child, he once suffered severe face and hand swelling after trying to produce home-made hot chili pepper paste.

In those days it was normal for young boys to learn the use of fire arms and hunting techniques. Soon he got fascinated by the extraordinary variety of tropical life around him, and spent much time observing insect behavior in the way of his much admired predecessor Jean Henry Fabre. In his own words "I observed in detail and photographed how horn structures are used by some male beetles during competition for females. I did not know, though, that the exact way these horns are used was considered a mystery at the time. Of course, I was only a lad and did not even think of publishing my observations".

One day an stuffed animal caught his eye and he was immediately interested. How could a dead animal be preserved and be made to look "life-like"?

His family was always supportive and soon he had someone teaching him the techniques. He remembered: "We followed an excellent learning method, but it required two specimens, so hunting for them was the hardest part because you had to be twice as lucky. The person teaching me would prepare one of the corpses and I would imitate him. I was particularly proud of a snake that I prepared through this 'learn by imitation' procedure".



Álvaro Wille Trejos

His relationship with the University of Kansas began when an expedition team from that institution arrived to the nearby port of Limón. They needed one guide to collect tropical rain forest specimens and somehow young Álvaro got that position. There he began a relationship with E. Raymond Hall, who saw the scientific potential of that brilliant boy. They kept corresponding and this led to an invitation to travel to Kansas and enroll in biology. In Álvaro's words: "Prof. Hall, a busy and famous

scientist, took time not only to read and answer all my letters, but also to mark up all the errors in my English. With every new letter from him, I also received my previous letter, edited, so that I could identify and correct my grammar mistakes!”.

He excelled as a student in Kansas, where he was part of a team that worked for decades deciphering the evolution of insect sociality. The many gaps in the knowledge of social behavior in tropical species was a major obstacle for the project, and Álvaro’s knowledge and work in Mesoamerica were basic to filling up those gaps.

Perhaps reflecting his old “stuffer” days, Álvaro enrolled in Kansas in a course about museum techniques and when he returned to Costa Rica, he established the Insect Museum, one of only six in the continent. Additionally to the scientific collections, the museum opened to the general public with evolutionary displays and ecological dioramas that were decades ahead of the meaningless accumulations of specimens that were frequent in museums at the time.

He spent his professional years at the University of Costa Rica’s Agriculture Faculty where he was mentor to well known names in Costa Rican entomology, including William Ramírez, discoverer of the extraordinary active pollen transfer mechanism of fig wasps. Wille and Ramírez were among the few Latin American entomologists to reach what I call “text-book status” by being cited in American college entomology books.

When I was his student, he gave me a thick insect ecology volume and told me to read two chapters at a time and come every other week to his office so we could discuss what I had read. Every time I would arrive with my notes and an uncritical enthusiasm about the theoretical framework that the author presented for some biological phenomenon. He smiled in a fatherly way and proceeded to dissect the theory, show me the many holes that it had, and advise me to be skeptical and to look “farther ahead”.

Many years later I began to fathom his wisdom and to realize the world-quality of his work. He published ethological observations

and even some natural history of bees and beetles, but most of his work is composed of thorough studies that are still obligatory reading, for example his papers on the phylogeny of all insect orders (Wille 1960), evolution of the nerve cord in bees (Wille 1961), systematics of Mesoamerican *Trigona* (Wille 1965), morphology of feeding apparatus in bees (Wille 1970), fossil stingless bees (Wille 1977), phylogeny of the stingless bees of the world (Wille 1979) and biology of stingless bees (Wille 1983). The monumental work on the nest architecture of stingless bees that he coauthored with C.D. Michener (Wille and Michener 1973) is now a classical of the entomological literature.

When Mount Saint Helen erupted in 1980 and affected 200 000 km<sup>2</sup> of temperate ecosystems, the entomological studies (Pyle 1984) could add little to what he and G. Fuentes had reported in their paper on the effects of volcanic ash on insects (Wille and Fuentes 1975).

His university professor facet was balanced by a less known facet, Álvaro the adventurer. In search for fossilized bees he set an expedition to the Mexican jungle at a time when there were few roads and the struggle between settlers and indigenous inhabitants often lead to murder. He found himself surrounded by a machete-armed group who did not speak Spanish. “We did not look like settlers, so they sent for an interpreter and after listening to our explanations, they believed we were not dangerous because we were odd enough to be looking for insects trapped in sap, but...”, he told me, and ended the phrase with a joke.

He also interned himself for prolonged periods in the isolated jungle of Corcovado in the south Pacific coast of Costa Rica, to study the ecology of a park that was endangered by illegal mining and urgently needed study and public attention. This almost cost him his life, but resulted in the extraordinary *Corcovado* (Wille 1987, 2001), a book that finely intertwines an evolutionary analysis of the park’s ecology with philosophical considerations about the human condition and our place in the Universe. The book received the National Aquileo J. Echeverría Essay Award in 1983.

After one trip to the Andes, the cold weather affected him so much that he had to go to a hospital in Quito. He never really recovered, to the extent that during the production of the second edition of *Corcovado*, the University of Costa Rica Press sent a graphic editor to the hospital, where he reviewed page proofs in bed.

His final years were afflicted by bad health, but he frequently received proof of the love and admiration of those who knew him closely. At least three insect species were dedicated to him: *Eulaema willei* (Mouré 1963), *Pseudomethoca willei* (Mickel 1969) and *Gigantodax willei* (Vargas and Ramírez 1988); a special meeting of the *Revista de Biología Tropical* was made in his honor; The First Costa Rican Entomology Congress was dedicated to him; I. Gauld and P. Hanson dedicated their *Hymenoptera of Costa Rica* (Natural History Museum – London, 1996) to him, as I did with my *Ecología* (University of Costa Rica, 1995); and the Biodiversity Institute recognized his contribution to the knowledge and conservation of neotropical biodiversity.

Álvaro Wille Trejos passed away on June 11<sup>th</sup>, 2006.

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