



William L. Nutting

The decision to pursue a career in biology came during Lt., j.g., William Nutting's long voyage back to the United States at the end of World War II. From an early age, nature had fascinated him, and depicting what he observed was equally strong.

Born in Pepperell, Massachusetts, on 26 July 1922, he grew up in Saco, Maine, where his father, Gerry, was a research engineer at the Saco-Lowell Mills. In Saco, Bill roamed the woods and fields near his home, collecting plants, insects, and road kills. Nearly every day he "worked at his desk," identifying the specimens he collected. He was fortunate in having a sympathetic and encouraging family. We are sure it took much forbearance on the part of his mother, Ethel, when he skinned a skunk in the garage. His only comment was that he had to change all his clothes! His mother particularly fostered his interest in things biological by seeing that he always had the latest volume on whatever the current topic might be, for example, on his eleventh birthday, he received Raymond Ditmars' *Reptile Book*. His father helped build cages to house live specimens. His Grandfather Nutting resolved problems with his artwork.

We have his Grandmother Nutting to thank for suggesting to Bill at age 10 that he write something in a diary every day. By the time he reached high school, these entries give a clear picture of his nature. One comment stands out. He always described the weather first. "It was a dull, cloudy day—I mean the weather. For me, no day, no matter what the weather, is dull."

He did well in school and was admitted to Harvard College in the class of 1944 with a tuition scholarship. The college years that started out quite normally became, with the declaration of war in the middle of his second year, very hectic. In three years, he completed the work necessary for the BA degree in biology—*Magna cum laude*.

He enlisted in the Navy in July 1943 and was commissioned as ensign after OCS training. After several months at sea, his ship docked in California for repairs, and Bill

traveled east to marry Elizabeth Chapman. This union lasted 10 years and produced two sons, Geoffrey and Bradley. He summed up his months in the Pacific as a repetition of Herman Wouk's *Caine Mutiny* without the mutiny.

Released from active duty, Bill enrolled at Harvard with F.M. Carpenter as his major professor and started work on a comparative study of the morphology of the orthopteroid heart. Requests to cite this unique study continued to be received many years after publication in the *Journal of Morphology*, and Nutting's drawings of the cockroach heart still appear in entomology texts.

During his graduate student years, he freelanced as an artist. The parasitologist L.R. Cleveland asked Bill to draw many of the illustrations in his publications on the relationship between the development of the sexual cycle of the gut protozoa in the primitive, wood-feeding roach, *Cryptocercus*, and the molting of the host insect. This work led to a postdoctoral research fellowship with Cleveland.

As graduate students, Bill and Floyd Werner had made extensive collecting trips to Cuba, Mexico, and the southwestern United States; the latter struck Bill as an entomologist's heaven. So, when his term as research fellow was ending, he inquired about openings in Arizona. He was offered and accepted a position at the University of Arizona. He had divorced his first wife and married Ruth Dunn the previous year. Bill and Ruth, -with his two young boys, arrived in Tucson, in September 1955, never suspecting their stay would last a lifetime.

Bill's first assignment involved the khapra beetle, an East Indian grain pest, infesting storage bins in Phoenix. Once this was controlled, Bill continued at the university, teaching insect morphology, physiology, and behavior. His lectures were never "cut and dried." Each year he added the latest research data. His exact organization, magnificent chalkboard illustrations, and enthusiasm made insect morphology, a potentially dry course, one of the most popular given in the Entomology Department.

Bill was comfortable in the field, excelling as a field biologist, and this led to his returning to Harvard and Boston University several summers to teach field zoology, emphasizing local fauna. He enjoyed contact with his graduate students. His door was always open, and he was a good listener. Under his direction, 17 students completed MS degrees, and 11 finished their PhDs.

By the early 1960s, Bill's research focused on the behavior and ecology of termites, documenting the influence of weather and time of day on flights of termites. This activity evolved into the studies of foraging behavior and demographics of termites on the Santa Rita Range Reserve, south of Tucson; and it was on this project that toilet paper was introduced as a sampling substrate for subterranean termites in arid lands.

Bill put his knowledge of termites to practical use by providing lectures for Arizona pest control operators. He also served the public by identifying wood-destroying insects and giving advice on control options for these pests.

With his research objects so close at hand, Bill found little need to travel far afield for material. However, in 1964, he took sabbatical leave to study the biology of Mexican termites in Jalisco. By this time, a third son, Gardner, was part of the crew. In 1980, he was asked to serve as project leader of the Grassland Termites Research Programme for the International Centre for Insect Physiology and Ecology in Nairobi, Kenya; most of his time there was spent in administrative and diplomatic duties.

No matter where the Nuttings traveled around the world, whether to scientific conferences or for pleasure, Bill always had a supply of vials of alcohol—just in case. He developed an extensive collection of termites from Arizona, as well as other localities, in the Entomology Collection at the University of Arizona.

Students and colleagues could depend on Bill's extensive knowledge of the literature of morphology, physiology, behavior, and, of course, termites and orthopteroid insects. His central core of information resided in a relatively small card file, obviously of very carefully chosen references. His broad knowledge also led to his contribution of chapters to several textbooks.

He was elected to the honorary societies of Sigma Xi, Phi Beta Kappa, and Gamma Sigma Delta. He was a fellow of the American Association for the Advancement of Science, a member of the American Society of Zoologists, the Entomological Society of America, the Arizona-Nevada Academy of Science, the Cambridge Entomological Club, and the International Union for the Study of Social Insects, and served as President of its North American Section in 1983.

In 1986, he retired from active teaching but was free of academic duties for only two years, when he was asked to return to the University of Arizona as Acting Head of the Department of Entomology. Bill continued with his research on the biogeography of termites even when terminally ill with cancer. Bill died on March 8, 1992.

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