



The Legacy of C. Fred Buchanan (1922-2007)

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San Diego lost another hero when C. Fred Buchanan passed away at The Cloisters in Mission Hills on March 12, 2007. Readers of the March 2006 volume of the *San Diego State University Occasional Archaeology Papers* (the SOAP) might recall his “Fort Guijarros Structural Analysis: Facts and Deductions” in Part 3 (Buchanan 2006:115-142). Members of the Fort Guijarros Museum Foundation and San Diego County Archaeological Society will remember their old friend who freely donated his lifetime experiences as a mechanical and civil engineer, world traveler, war veteran, and United States Navy departmental director of Public Works (Figure 12.1). All who knew him reflect fondly on his cheerful tales and explanations of everything from 18th-century Spanish fortification to 20th-century bridge construction.

Buchanan was born and raised in Michigan farm country in the 1920s and learned practical mechanics, construction, and irrigation from his father and the older generation of metal smiths. He graduated from high school just as Germany invaded Poland and drove England from France. While studying mechanical engineering at the University of Michigan, the United States Army drafted his entire class. They promptly shipped these twenty-one students off to three weeks of soldier training, followed by intensive engineering training in Kentucky, where they learned how to survey, select locations, and install water and fuel pipelines and pumping stations in remote locations. The young soldiers were then flown to Miami, Florida and given a few days off. Buchanan recalled that the streets and sidewalks were littered with coconuts because all the landscapers had been drafted into the Armed Forces. The twenty-one soldiers were then piled into a cargo plane and flown across the Atlantic Ocean to Africa and from there to India, where Buchanan’s real adventures began.

Japan conquered China in the late 1930s and garrisoned an enormous military presence in much of Southeast Asia by the time their naval forces bombed Pearl Harbor, Hawaii on December 7, 1941. Out-gunned, the British Army fell back across Southeast Asia and suffered horribly in the early years of the war. Buchanan’s plane landed amidst the China-Burma Campaign, which, in 1942, was largely run by the British Army. The specialized United States Army engineering troops were sent out to the front lines and were out of contact with American forces almost immediately. Years later, Buchanan would recall tipping his head back at the roar of a flight of fighter planes and distinctly remembering the colorful shark teeth nose-paint of the Chinese-American Flying Tigers. He further observed that the American uniforms swiftly rotted in the humid jungle environment. Their only options for replacements were British uniforms, on which they attached their United States insignia.

From the beginning of their military tour of duty, the twenty-one Army engineers explored the heavily forested jungles of India and Burma following British Gurkha guides, commanding

Nepalese work crews in the construction of roads, bridges, revetments, and installing pipelines, pumps, and holding tanks for the water and aviation fuel to be used on the front lines. After Buchanan observed his comrades continually getting sick after eating native plants, he acquired a monkey from a British soldier and ate the foods foraged by his little primate pal. Buchanan learned to like raw native onions that he ate like apples and, as he was the only individual in his group who never came down with malaria, attributed his immunity to that bulb. The local foods also protected the soldiers on the front lines from detection by Japanese soldiers, who often tracked Americans by the smell of their K-ration foods. While hiking single file through the jungle with several of his fellow engineers, an enemy sniper opened fire and Buchanan's troops returned fire to silence their opponent. On yet another occasion, Buchanan's engineers got lost in the jungle, only to hear Scottish bagpipes and find a line of British soldiers marching in his direction.

Combat often erupted to either side of Buchanan's survey and construction teams. After a while, his troops grew accustomed to operating around the firing line. On some occasions, they would climb high in the tree canopy to observe the raging battles between Allied Forces and Japanese infantry. His own troops suffered losses of men and equipment when their bulldozer-tanks slipped off the soft and rain-slippery Burma Trail. On one occasion, Buchanan drove a truckload of metal pipes towards a construction site on a steep mountain road and thought he had mentally calculated the time it took the Japanese artillery to reload between barrages. However, he miscalculated and artillery shells rained all around, triggering a massive landslide that took out his truck. Tumbling down the mountain, Buchanan realized he was headed for the Japanese artillery position. He jumped out of the spinning truck, dodged the flying metal pipes, and crawled back up the mountain in total blindness. Hours later, American troops rescued him and rushed him to a field hospital, where he learned that he had lost his left eye. Unable to ship him home, or fit him with a blue glass eye, the medics inserted a brown glass eye and sent him back to his unit to finish out the war. Sadly, he had to give his monkey to another soldier when he returned to the States after the war ended.

Buchanan returned to a peacetime America to receive a blue glass eye, complete his engineering degree, and take up his original trade of farming. Soon afterward, he tragically lost his first wife to a stroke. After turning the farm over to his in-laws, Buchanan packed up his son and personal belongings and moved to San Diego for a brief career with the International Water and Boundary Commission along the U.S.-Mexico Border. He joined his parents at their Boundary Street home for a time. While with the Commission, Buchanan took on an assignment to research the weather and rainfall patterns over the past century in order to predict flood hazards along the various rivers between Arizona and San Diego. Always an intensively observant and methodical man, Buchanan developed an appreciation for historical maps and records.

At some point in the early 1950s, Buchanan accepted a lateral transfer to the United States Navy, Public Works Center in San Diego and began designing and constructing public improvement projects. He launched a thorough survey of all extant land surveys, maps, and records housed by the United States Army, Marines, and Navy. Among his early interesting assignments were the sea wall repairs at the old United States Army, Fort Rosecrans, which required him to walk along the south beach of Ballast Point. Here he observed broken, Spanish, fired, red-clay tile eroding out of an earthen bank.

The Army put Fort Rosecrans up for surplus, and the department of General Services divided the 1852 Military Reservation into large sections for the National Park Service (Cabrillo National Monument) and the National Cemetery (former Post Cemetery and now Fort Rosecrans National Cemetery). It transferred most of Point Loma to the United States Navy in 1959. Buchanan and his sailors were the first to arrive at the doors of the defunct Army Post Engineer. He found a huge mound of rolled charts and maps the Army intended to burn as trash. With Buchanan standing guard, he instructed his sailors to haul hundreds of these irreplaceable documents out to a truck and then proceeded to carefully examine, catalog, and microfilm the entire cache for posterity. When the Public Works Center built the Navy repair facilities and converted the Army post buildings to offices, Buchanan had all the old Army records delivered to the United States National Archives. To this day, the Navy uses those maps to trace underground power and utility lines and evaluate the historical significance of potential contributing elements to the Fort Rosecrans National Historic District.

Buchanan and his second wife, Mary, traveled the world following his retirement in 1975. They often visited his son Michael in England, a United States Army Vietnam veteran, and daughter, Penny, in Georgia, where she served in the United States Marines. Their daughter, Pat Russell, and her husband owned and operated an avocado orchard and sold real estate in north San Diego County. In the late 1970s Buchanan began reading newspaper accounts of the discovery of an 18th century Spanish fort buried under the parking lot in front of an 1898 United States Army artillery battery. Recalling the broken tiles he observed at Ballast Point many years earlier, Buchanan visited the Fort Guijarros Museum Foundation archaeological investigations in 1982. He found that many crew members were volunteers, including many retired men and women, like him, from engineering and mechanical fields. Daughter Penny became a volunteer, and in no time at all, Fred joined the field crew. Mary soon followed and they both became regular participants.

As director and permit holder, I learned the skills, weaknesses, and interests of my crew and knew precisely where the Buchanans could best serve the project. The glue that bound all the Fort Guijarros archaeology field crew from the 1981 beginning was the instant acceptance for the life experiences that each person brought to the project. Almost immediately, Mary Buchanan discovered broken clay smoking pipes and a porcelain doll figurine in the ashy gray sand amidst whale bones and mid 19th-century artifacts associated with the European-American civilian whale-hunting companies that had set up operations on the ruins of the 18th-century Spanish fort.

Fred applied his surveying and engineering skills to map and document the complex layers of colored sand, loam, and sterile fill that cross-bedded the ruins. His exquisite maps of architectural remains drawn between 1982 and 1996, and coding for interpreting the crumbling process of architectural decomposition will live on as an excellent contribution to the archaeological records of California's historical archaeology. His drawings of the foundation of the Whalers' Tryworks documented a major archaeological find on Ballast Point. Fred loved it all, and he and Mary helped define the crew and the research project.

When I opened large field blocks to test areas around the walls of Fort Guijarros, Fred turned to a careful examination of 1,200 Spanish tiles and fragments, hundreds of pounds of white-washed

plaster rubble, and tens of thousands of architectural scraps recovered from the Spanish and Mexican fort levels, American whaling levels, and a burned 1916-1922 United States Army building. He produced a key for the best examples of each type of Spanish architecture (rectangular, square, rhomboid, asymmetrical, and those with shaped wedges for notching) and created an alphanumeric code system to streamline the field observations. The incredible hand-sketched record of his observations of individual tiles from the fort contribute to a far better understanding of Spanish buildings than anyone before him had ever considered. Essentially, he attempted to reverse engineer the fort from a theoretical and archaeological perspective, using his own observations of the fort's remaining architectural debris.

Lacking the actual plans of the old Spanish Fort, Buchanan held a number of work sessions at his Mission Hills house for senior members of the Fort Guijarros archaeology project to interpret his findings and theories. The Spanish Consulate of Spain in Los Angeles provided a grant to hire Dr. Donald Cutter from the University of New Mexico to travel to Spain. He was to search their archives for documents that could clarify the architectural nuances of Fort Guijarros. This work was published as "Search for Fort Guijarros: A Personal Research Effort Sponsored by the Casa de España en San Diego, The Spanish Consulate in Los Angeles, and Iberia Airlines," in the *Fort Guijarros Quarterly* (3)4:6.

San Diego State University provided groundwork for Cutter's research in "San Joaquin: A Preliminary Historical Study of the Fortifications at San Diego's Punta de Guijarros," published in the *Tenth Annual Cabrillo Historic Seminar*. Jesús Benayas, also a Civil Engineer, traveled to Spain and obtained a facsimile copy. Buchanan recruited his friends, Colonel Frank Quillin, United States Army (ret.), and Margaret Quillin, to translate the Spanish document, and their work was published as "A Translation of Chapter VI of Don Pedro de Lucuze's 1772 *Principios of Fortification, As It Relates to the Design of the Fort at Punta de Guijarros, San Diego, California*," *Fort Guijarros Quarterly* (2) 1:3-7. I produced a copy of "A Sojourn in California by the King's Orphan: The Travels and Sketches of G.M. Waseurtz af Sandels, A Swedish Gentleman Who Visited California in 1842-1843," that Grabhorn Press published in 1945. Buchanan used this to help interpret the fort's appearance. Through 1987 to 1990, the Fort Guijarros Museum Foundation published four issues a year of *The Fort Guijarros Quarterly* to document the research, field investigations, lab analysis, and thinking of our research committee and Fred's ongoing contributions.

In 1989-1990, Fred and I worked with fine artist Jay Wegter to present a visual interpretation of how the 18th-century Spanish fort appeared. Wegter created a series of four watercolor paintings of views of the fort, based on Buchanan's architectural drawings and interpretations of the Spanish tile and mortar articulations. Wegter created one painting from the perspective of the American merchant brig *Lelia Byrd* that fired on Fort Guijarros on March 22, 1803, and another from the view inside of its gun deck. Yet another view looked at the fort from the beach. Perhaps the most popular of this watercolor series is a bird's eye view of the fort from about 250-feet above. Two of these paintings were lithographed for public sale and a complete set are hanging in the Fourth Grade Old Town History Program facility. Another set hangs in the new House of Spain, which was dedicated in October 2007 in Balboa Park.

When the field archaeological excavations ended, Fred assumed a major role in the artifact analysis in the lab on the submarine base that opened in 1989. He volunteered every Saturday, and for a decade worked methodically through the architectural analysis of the Old Spanish Fort, the Ballast Point Whaling Station, and the U.S. Army Fort Rosecrans collections.

In July 1995, Captain David Stanley, Commanding Officer, Naval Submarine Base, dedicated the Ballast Point Repository in the Buchanans' honor. A brass plaque celebrating Fred and Mary's work was installed on the south door of the Repository during the ceremony on Naval Base Point Loma. Located near the Fort Guijarros Lab, the Ballast Point Repository houses all of the artifacts recovered from the Fort Guijarros investigations and will, ultimately, house the field notes and administrative records. In 1996, the Fort Guijarros Museum Foundation published Fred's findings in the first *Fort Guijarros Journal*.

While the 1995 dedication was a fitting tribute to both Fred and Mary's contributions up until then, Fred was far from done with the project. After he worked his way through thousands of artifacts from these collections, he turned to inventorying and cataloging all of the field maps in the collection, filing them in large flat archival books. When he finished that, he began to work on the photographs and helped with data entry. In total, Buchanan completed the analysis and cataloging of tens of thousands of metal artifacts and architectural remains, and attended to anything else required of him. He also organized his notes, drawings, and engineering plans for presentation in a special publication devoted to the architecture of Fort Guijarros.

In 2006, Dr. Seth Mallios of San Diego State University published Buchanan's final work in the *SOAP*, the Anthropology Department's first on-line archaeological publication. At age 83, Fred had the satisfaction of seeing his complete work on the architecture of Fort Guijarros published for future scholars to peruse.

However, Buchanan's lifetime of contributions to San Diego archaeology encompassed more than his extensive work on the Fort Guijarros project. In 1982, he and Mary began attending monthly lectures of the San Diego County Archaeological Society and, within a few years, his interest led him to run for a seat on the board of directors. He was elected by the membership to serve as vice president of research. Fred also served as a liaison with the County of San Diego, maintaining a library and office, conducting docent tours, and presenting monthly lectures at the 1820s-1900 vintage historical adobe ranch house at Rancho Peñasquitos. He was also a member of the Board of Directors for Fort Guijarros, and served as the foundation's representative on the SDCAS board.

Fred and Mary volunteered to help excavate the rooms and the surrounding yard of the old adobe, and their circle of friends expanded further. They participated in field trips and special events. When County Parks wanted to restore the late 19th century "lath barn" at Peñasquitos Park, Buchanan organized a team of contractors, engineers, and volunteers to survey, map, and photograph each board in the building. He labeled each piece with code numbers, and established a plan to replace rotted wood. Fred adjusted for the Uniform Building Code requirements that required over-engineering a foundation that far exceeded the needs of the small barn, and found a sawmill in Northern California that would custom-cut all the replacement boards. He glued wood boards to the concrete deck and cut modern square nails so the heads

could be glued into the original nail holes to make the floor appear realistic. After completion, Buchanan found a recipe for old-time white wash and the Society held an old time white-washing party to coat the barn. Today, the casual observer would believe the lath barn looks a century old.

Fred took great pleasure in helping to prepare and run SDCAS's annual Mock Dig for juniors, which was a significant part of "Arch in the Park," held at Rancho Peñasquitos. He also took his turn to staff the SDCAS Fair Booth at the Del Mar Fair, where he was delighted to share with visitors his passion for San Diego's history. He greatly enjoyed all of his activities with SDCAS and his archaeology friends, be it hosting a White-Elephant Party at his house, or just watching movies on Friday nights, and the friends he made were lifelong.

By 2006, time had taken its toll on our old friend and mentor, and he was ready to hang up his trowel, if not his passion. Coincidentally, the last movie my wife Dale and I saw with Buchanan was Clint Eastwood's *Letters from Iwo Jima*, a movie about World War II, the time when our friend's adventures began.



Figure 12.1. Engineering expert C. Fred Buchanan excavates at Fort Guijaros. Courtesy Ron May.