A Short Biography of James Clarke Greenacre

Robert O’Connell and Anthony Cook

Early Years: 1914-1934

James Clarke Greenacre was born to Ada and Edger Greenacre on January 9, 1914 in Fort Collins, Colorado. They lived on the 20,000 acre Greenacre Ranch near the small town of Livermore north of Fort Collins for the first several years of his life. (Private communication, Greenacre’s eldest son, James E. Greenacre, Jr., 2010).³ (See Figure 1). In 1917 his father and uncle sold the ranch and in November 1918 Greenacre and his parents moved to a small two-story residential house in Fort Collins⁴ (See Figure 2).

Greenacre met his future wife, Doris June Brollier (1916–2001) while they were attending Fort Collins High School.⁵ (See Figures 3 and 4). On weekends he worked as a ranch hand for the new owners of the former Greenacre Ranch using horse-drawn equipment as tractors were scarce at that time.⁶

Having been influenced by his father’s keen interest in anthropology, when time allowed he roamed the prairies of northern Colorado searching for Indian artifacts. This fascination motivated his pursuit of a degree in anthropology which eventually led to his first career as an archeologist.⁷

Anthropology/Archeology: 1934 -1942

In September 1934, Greenacre enrolled as a freshman at Colorado A&M⁸ in Fort Collins to pursue a degree in anthropology.⁹ He worked the weekend 4 PM to 2 AM shift at a local hamburger shop to make ends meet and in the morning, after polishing his shoes with hamburger grease, arrived promptly at 8:30 AM for ROTC where he was a Calvary platoon captain.¹⁰ At the end of his sophomore year, in the fall of 1936, he transferred to the University of New Mexico (UNM) in Albuquerque because of its reputation for archeological research.¹¹ At UNM he joined the excavation crew at the Sandia Cave archeological site north of Albuquerque and worked on excavations at the Chaco Canyon in northwestern New Mexico.¹² In 1937 he was elected president of the Tiwa Archeological Association.¹³ At night he washed dishes in a saloon and on Saturday nights, now being

Figure 1. Greenacre Ranch near Livermore, Colorado. (U.S. Geological Survey Photographic Library).

Figure 2. Greenacre residence at 120 W. Magnolia St. downtown Fort Collins. (Courtesy Fort Collins Historical Preservation Office).

Figure 3. Greenacre high school photo. (Courtesy Fort Collins Local History Archive).

Figure 4. Greenacre and Doris Brollier in 1932 at the Fort Collins High School. (Courtesy Fort Collins Local History Archive).
over 21, tended bar. Initially he lived with two other students in a basement apartment with no bathroom but soon found better living arrangements.\(^{14}\)

His archeological training accelerated in the summer of 1937 at the age of 23 on return home to Fort Collins for summer break when Smithsonian Institution archeologist Dr. Frank H. H. Roberts, Jr. approached Greenacre to join the excavation team at the Lindenmeier archeological site 25 miles north of Fort Collins.\(^{15}\) Greenacre was one of several young archeologists selected to work the site over two summers (1937-1938).\(^{16}\)

He recalled excavating artifacts for Roberts, “. . . inch-by-inch (with a toothbrush and a grapefruit)\(^ {17}\) accounting for every flake of material . . . accuracy was a must . . . Roberts was really picky about keeping our walls perfectly vertical . . . this was necessary in order to keep the stratification of the site intact, which was important for determining age and origin of artifacts found within the site.”\(^ {18}\) (See Figures 5 and 6).

By the Fall of 1938 he had earned more than enough credits for a degree in anthropology but was unable to graduate. Despite the fact he had been accepted at UNM and his grades from A&M were good, it was not until his arrival to the UNM campus in 1936 that he was informed by the Registrar’s Office that 32 credit hours would not transfer which put him back a full academic year.\(^ {19}\) Despite this situation, he decided to remain at UNM in a race against time and money maintaining a better then required “B” average.\(^ {20}\) But employment during the Recession of 1937-1938 was elusive and he eventually found himself “dead broke.”\(^ {21}\) He later recalled he was looking for any option and had even considered a degree in geodesy having earned 40 credit hours in astronomy coursework.\(^ {22}\) But he could not put together the proper mix of credits and so was forced to drop out of the UNM during what should have been his senior year without a degree.\(^ {23}\) Years later he humorously reflected on this unfortunate confluence of circumstances stating “So I’m just no good.”\(^ {24}\)

At this point Dr. Roberts and archeologist-friend C.T.R. Bohannon interceded on Greenacre’s behalf helping him to secure employment in the department of Anthropology at the University of Kentucky (UK), Lexington.\(^ {25}\) UK was using federally financed Works Progress Administration (WPA) funds to excavate several significant archeological sites across Kentucky and Greenacre accepted a full-time position as the University’s Archeological Supervisor of Field Excavations for $150 a month.\(^ {26}\) After receiving a substantial $30 a-month-raise, he sent for his fiancée Doris back in Colorado and they were married on May 30, 1938.\(^ {27}\)

Greenacre supervised excavations at the Carlson Annis Mound in Butler County; C&O Twin Mounds in Johnson County; Adena Culture site (Hooton Hollow) in Menifee County and the Roach Site in western Kentucky.\(^ {28}\) He also prepared reconnaissance surveys of the area now covered by the Kentucky Dam and Lake.\(^ {29}\) It was toward the end of his work in Kentucky that Greenacre’s daughter, Sabra, was born in 1941. Greenacre refined his cartographic techniques as well as his documentation and photographic skills as supervisor of these sites during this six-year period.\(^ {30}\) (See Figure 7).
In 1988 the University of Kentucky’s Museum of Anthropology and the Kentucky Heritage Council flew Greenacre and his wife out from Ft. Collins to accept an award in recognition of his “significant role in the development of Kentucky archaeology during the New Deal era.” J. E. Greenacre, Jr. recalled “I believe his reputation in documenting, mapping and photographing sites was why the U.S. Army Map Service would later pursue my father for war related cartographic work. He quickly moved from a field archeologist to a high security-clearance position at the Pentagon.” (Private communication 2010).

**U.S. Army Map Service: 1942-1945**

At the age of 28, Greenacre transitioned from archeology into military cartography just as WPA funds were drying up, he was again “flat broke” and America was at war. While Greenacre never harbored a desire for a military career, in May 1942 the U.S. Army Map Service (AMS)33 “persuaded” him to accept a civil servant position becoming manager of cartographic field offices and starting first in Louisville, Kentucky.34 Once in this position he quickly realized, “. . . the Army was desperate for map makers to update its antiquated stock.”35 One of the first things he did was travel to Washington, D.C. to research what maps currently existed in the Department of Defense archives for war planning in the European theater of war. To his dismay he found “. . . the newest maps of France dated to the days of Napoleon. No wonder we weren’t prepared for invasion.”36

Greenacre would manage AMS field stations in Louisville Kentucky as well as in Cincinnati and Cleveland Ohio.37 One mapping staff of 300 he supervised was producing, “. . . detailed maps of France and North Africa for advancing Allied troops” and in Cincinnati he supervised a staff of 140 draftsmen who were producing military maps of Greece.38 Later in 1944 Greenacre was assigned high-security clearance, transferred to the Pentagon and appointed chief geographer of the Geographic Names Branch of the AMS.39 Here he worked with an international team of analysts who were translating captured foreign charts in six languages and preparing D-Day invasion routes.40 (Private communication, J. E. Greenacre, Jr., 2011). Greenacre later recalled during that time: "A lot of the stuff I did went from my office to the White House . . .” 41

**U. S. Board on Geographic Names: 1945-1951**

At the end of the war the family remained in Washington D.C. where Greenacre accepted a civil servant position as the Army’s representative to the U.S. Board on Geographic Names (BGN).42 The BGN is a Federal agency created in 1890 to maintain uniform geographic name usage throughout the Federal Government. During World War II the BGN mandate expanded to include foreign geographic names.43


In 1951 chronic sinus issues made it difficult for him to tolerate the humid Washington D.C. climate and the family moved to drier Denver, Colorado based on advice from Greenacre’s doctor. Here he worked on topographical maps of the Northwestern United States at the U.S. Geological Survey’s field office.44 He also worked as a cartographer for a private engineering company and during this time his sons James and Timothy were born.45 The family’s stay in Denver was short-lived however as congenital health issues affecting 5-year-old Jim, Jr. would force the family to move once again.46 (Private communications, J. E. Greenacre, Jr., 2011).
U.S.A.F. Aeronautical Chart and Information Center: 1957-1973

In 1957 the Greenacre family moved to St. Louis, Missouri to be in close proximity to an endocrinologist who specialized in the treatment of his son Jim’s adrenal hyperplasia. (Private communication, J. E. Greenacre, Jr., 2010). Greenacre quickly secured employment as a terrestrial military cartographer with the U.S. Air Force Aeronautical Chart and Information Center’s (ACIC) national headquarters initially managing map production in the Information Section and later advancing to classified work in the Research Division (Private communication, J. E. Greenacre, Jr., 2011). It was at the ACIC in 1961 where Greenacre was drawn into his third and final career becoming a U.S. Air Force lunar cartographer-observer for NASA’s Project Apollo at Lowell Observatory in Flagstaff, Arizona. (See Figure 8).

Two years into this position Greenacre would witness his first transient lunar phenomena (TLP) episode on October 30, 1963 (UT) with fellow cartographer-observer Edward M Barr. Greenacre was reportedly “dumbfounded” on this night when the first two reddish TLP suddenly began to form and brighten 20 minutes into his observing run obscuring the lunar surface below them and both manifesting small white points of light streaming outward in a “downward motion” over the lunar topography. Greenacre, obviously caught off guard by the TLP, later lamented that “After it’s all over, you feel kind of stupid of course, to think of all the things you could have been doing but didn’t.” On November 28, 1963 he would witness a second TLP episode again with Barr as well as with ACIC scientific illustrator Fred Dungan and Lowell Observatory Director John S. Hall. James E. Greenacre, Jr. recalled during family breakfast on the Saturday morning following the November event, “My father was kind of in awe as to what he had witnessed.” (Private communication 2011). These were the only two times TLP were ever reported by observers associated with the USAF Moon-mapping program. Details on these TLP observations were published, with approval of the USAF in: the December 1963 Sky and Telescope Magazine, in the proceedings of a symposium on lunar geological problems in May 1964 at the New York Academy of Sciences, in a May 1964 USAF report, Lunar Color Phenomena, and in the Autumn of 1965, he presented a paper, “Red Spots, Recent Observations” at a National Academy of Sciences to a lunar symposium at the Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California.

Greenacre remained with the ACIC Lowell lunar-mapping program for eight years eventually becoming Acting Chief in 1967. In this position he and illustrator-program manager, Terry McCann, oversaw refinements of the original Lunar Aeronautical Chart Series (LACs) and other mapping projects based on imagery from NASA’s Lunar Orbiters (1966-1967). Greenacre was also one of the ACIC members who was responsible for deciding which chart versions were sent to NASA for final Apollo mission planning. (See Figure 9).
Greenacre was the first ACIC full-time observer-cartographer to join the program in September 1961 and the last to leave Flagstaff after overseeing the Lowell station closing in September 1969.61 (See Figure 10).62 Greenacre returned to the ACIC in St. Louis in late 1969 resuming cartographic work there until taking early retirement in 1973.63

Retirement: 1973-1994

After retiring from the ACIC Jim and his wife Doris remained in a suburb of St. Louis for a short while until chronic arthritis led them to seek a drier climate. They had initially intended to return to Flagstaff but finally decided to return to Colorado.64

There they together managed the Wellington Hotel in Wellington, Colorado north of Fort Collins for several years. Eventually they moved back to Fort Collins and became active in local historical preservation projects.65 Greenacre continued working part time managing irrigation systems in Livermore for Poudre Irrigation, Co. and for the Old Fort Collins Water Works. He also served as archeological consultant during this time for Meadow Springs Ranch Project north of Fort Collins as anthropology and archeology had remained his life-long passions. (See Figure 11).

In 1988 he began receiving radiation treatments for prostate cancer (Private communication, J. E. Greenacre, Jr., 2011) and in the early 1990s, now in his late 70s, Greenacre’s health continued to fail until he passed away at the age of 80.

Figure 9. (top) Greenacre in 1967 as Acting Chief of ACIC Lunar Observation Section in front of a Lunar Orbiter V (LO) Aristarchus mosaic. (bottom) Greenacre inspecting a version of the first edition Lunar Far Side Chart (LFC-1). This chart was based on LO images and released in August 1967. (Courtesy Greenacre Family).


Figure 11. James Greenacre (far right) in 1980 at the age of 66 revisiting the Lindenmeier Folsom Man Site, north Larimer County, Colorado where he had worked on excavations in his youth. (Courtesy Fort Collins History Connection).
from lung cancer at the Poudre Hospital in Fort Collins on November 21, 1994.66 He was buried on November 28th at Grandview Cemetery, Ft. Collins, Colorado. (See Figure 12).

Figure 12. Greenacre headstone, Grandview Cemetery, Ft. Collins, Colorado. (Image: G. Hazard)

In 1996, the Northern Colorado Chapter of the Colorado Archeological Society established the James C. Greenacre Scholarship Fund using a donation from Doris Greenacre in memory of her husband.67 Doris passed away in Fort Collins on March 24, 2001. Jim and Doris Greenacre are survived by daughter Sabra Minkus (b. 1941) and sons James (b. 1952) and Timothy (b. 1954), 19 grandchildren and 22 great grandchildren. (Private communication, J. E. Greenacre, Jr., 2012).

Acknowledgements

The authors thank James C. Greenacre’s eldest son, James E. Greenacre, Jr. and his wife Denise Greenacre for providing information and images for this biography. We also thank Tiffany Righero, Research Assistant, Fort Collins Local History Archive for relevant biographical material and additional images and Lauren Amundson, Lowell Observatory Archivist, for her assistance in accessing relevant documents.


References and notes

3 James E. Greenacre, Jr., born 1952.
5 Hartwig 1976, op. cit., ref. 3, p. 16.
7 MacArthur, D., ‘Archeologist packs lots into life, now he's being honored’, Fort Collins Triangle Review, 1988 Feb 17
10 Baker 1983/2005, op. cit., ref. 5, serial line entries 676-682
12 Baker 1983/2005, op. cit., ref. 5, serial line entry 231
16 Hartwig 1976, op. cit. ref. 3, p. 85
17 Ibid., p. 86
18 Sherman 1994, op. cit., ref. 14, p. 17
19 Baker 1983/2005, op. cit., ref. 5, serial line entry 658
20 Ibid., serial line entry 658
21 Ibid., serial line entry 1527
22 Hartwig 1976, op. cit., ref. 3, p. 14
23 Ibid., p. 14; Baker 2005, op. cit., ref. 5, serial line entry 149
24 Hartwig 1976, op. cit., ref. 3, p. 14
25 WWII veteran and noted archeologist Charles T.R. Bohannan with whom Greenacre worked at various archeological sites became his closest life-long friend (Private communication, J. E. Greenacre, Jr. 2010).
27 MacArthur 1988, op. cit., ref. 6; Hartwig 1976, op. cit., ref. 3
30 Greenacre recalled in 1983 “That was another reason I think I got (hired) on for (ACIC) Lowell lunar mapping program,” cause they looked for
someone that knew a little bit of photography and I guess I was the only one, because Bill (Cannell) didn't know any photography.” In Baker 2005, op. cit., ref. 4, serial line entry 1692. Greenacre built and initially managed the first ACIC darkroom for developing film taken through the 24-inch Clark refractor at Lowell.

31 See invitation letter dated 1987 Aug 19 to James C. Greenacre from Mary-Lucille Powell and David Pollack from the University of Kentucky, Lexington. Letter in Fort Collins Local History Archive, op. cit., ref. 3, (copy received via post Jan 31)


35 MacArthur 1988, op. cit., ref. 6

36 Ibid.

37 Ibid.; Hartwig 1976, op. cit., ref. 3, pp. 76-77


39 Greenacre 1985, op. cit., ref. 33, Sec F176; MacArthur 1988, op. cit., ref. 6. In the article, reference is made to the ‘Division of Place Names’ which was actually the Geographic Names Branch of the Army Map Service. (Clarification – private communication, J. E. Greenacre, Jr., 2011)


41 Baker 1983/2005, op. cit., ref. 5, serial line entry 692; MacArthur 1988, op. cit., ref. 6

42 Greenacre 1985, op. cit., ref. 33, Sec F176; Baker 2005, op. cit., ref. 5, serial line entry 692; MacArthur 1988, op. cit., ref. 6


44 Editor, 1994, 'Greenacre Obituary', Fort Collins Triangle Review, 1994 Nov 30

45 Baker 1983/2005, op. cit., ref. 5, serial line entry 1644

46 MacArthur 1988, op. cit., ref. 6


50 Jackson 1964, op. cit., ref 47, p. 9


52 No other TLP were seen by the ACIC Lowell Observatory observers either before or after The 1963 Aristarchus Events. This was confirmed by J. E. Greenacre: “I asked him about the TLP reports at his and my mother’s 50th wedding anniversary in 1988. I flew home from the Philippines and was there 7 days. And I had a couple of good times to talk and that was the last time I had a chance to talk to him before he started to decline and he started having health issues. But I asked him if he had ever seen anything previous to or after that and he said -- ‘No.’ (Private communication 2011)


54 Greenacre 1965, op. cit., ref 48


56 Greenacre J. C. 1965, ‘Red Spots, Recent Observations’, Greenacre presented this paper at a meeting of the National Academy of Sciences, Autumn 1965, ‘Scientific Sessions, Symposium on Surface Features of the Moon’, Jet Propulsion Laboratory, California Institute of Technology, Pasadena. Janice F. Goldblum, Archivist for the National Academy of Sciences (NAS) confirmed this paper was presented by Greenacre but was unable to locate a copy in the NAS Archives. (Private communication, 2009 Dec 31)

57 Greenacre assumed the Acting Chief position once William D. Cannell, the first director of the ACIC Lunar Observation Section, left the program to pursue a degree at the University of Virginia later in 1967. See: J. S. Hall recommendation letter dated 1967 Jul 5 for Cannell addressed to the Office of the Dean of Graduate School of Arts and Sciences, University of Virginia in J. S. Hall papers, Lowell Observatory Archives, Flagstaff, Arizona.

58 For example, Terry McCann’s collaboration with Greenacre is referenced in J. C. Greenacre personal letter to W. D. Cannell (1967 Nov 15) in J. C. Greenacre papers, Lowell Observatory Archives, Flagstaff, Arizona.


60 Baker 1983/2005, op. cit., ref. 5, serial line entry 1664


62 Full caption for Figure 10 as it appeared in the 1969 Aug 16 issue of The Arizona Daily Sun: “FLAGSTAFF SCIENTIFIC community will lose James C. Greenacre next month as the Air Force phases out its lunar-mapping operations at Lowell Observatory in Flagstaff. Greenacre, who directed the A.F. Aeronautical Chart and Information Center (ACIC) office here, will be transferred to the national ACIC center in St. Louis, Mo. (SUNphoto by Jim Davidson.)”

63 Baker 1983/2005, op. cit., ref. 5, serial line entry 1676

64 Hartwig 1976., op. cit., ref. 3, p. 19

65 Ibid., pp. 19-21
