

James P. Morgan: Personal Perspectives

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ABSTRACT

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A graduate of the University of California-Berkeley and Louisiana State University, James Plummer Morgan made a distinguished career of teaching and research in coastal and deltaic processes and sedimentation. Morgan was first introduced to coastal processes by Professor Murrough P. O'Brien at Berkeley. On graduating in geology from Berkeley, Morgan continued his education after World War II at Louisiana State University under Professor Richard J. Russell. Together Russell and Morgan co-founded the Coastal Studies Institute at LSU and laid the foundation for beach process studies in the United States and around the world. Morgan established his own externally funded research program by unveiling startling new evidence showing the rapid deterioration of Louisiana's barrier islands and marshes. He also conducted pioneering research on diapiric structures and deltaic processes with emphasis on the Mississippi River and the Ganges-Brahmaputra deltas. On retiring from LSU after 30 years of service, Morgan moved to Florida where he remained active in teaching, research and advising state and local governments on coastal management issues. This paper reviews his achievements and contributions and provides some insight on James Plummer Morgan the scientist, teacher, and humanitarian.

ADDITIONAL INDEX WORDS: *James Plummer Morgan; William Morris Davis; Richard J. Russell; Murrough P. O'Brien; Coastal Studies Institute, Louisiana State University; University California-Berkeley; coastal geomorphology; deltaic processes.*

INTRODUCTION

Practitioners of the coast will likely agree that the birth of modern-day coastal geology/geomorphology occurred in 1919 with the publication of D.W. Johnson's text, *Shore Processes and Shoreline Development*. In December of that year, James Plummer Morgan was born in southern California. Morgan too, in years to come, would make significant contributions to enhancing our understanding of deltaic geology and coastal geomorphology.

Morgan was a particularly bright child, with a keen eye for detail. He relished the outdoors and was very much aware of his natural environment. Thus, it did not come as a surprise to his family and friends when he won a full scholarship to study geology at the University of California-Berkeley. It was at UC-Berkeley where Morgan was introduced to the Davisian School of Geomorphology. The old master, William Morris Davis, had lectured there many times after his retirement from Harvard, and, although Morgan arrived at Berkeley 10 years after Davis' death, the Davisian School was very much part of the Berkeley curriculum. Two things would happen to Morgan at Berkeley that, unknown to him, would play a pivotal role in fashioning his career in deltaic geology and coastal geomorphology.

THE BERKELEY YEARS

While studying for his degree in geology at Berkeley, Morgan became very aware of the work being conducted by a UC-Berkeley alumnus, Richard J. Russell. Russell was a com-

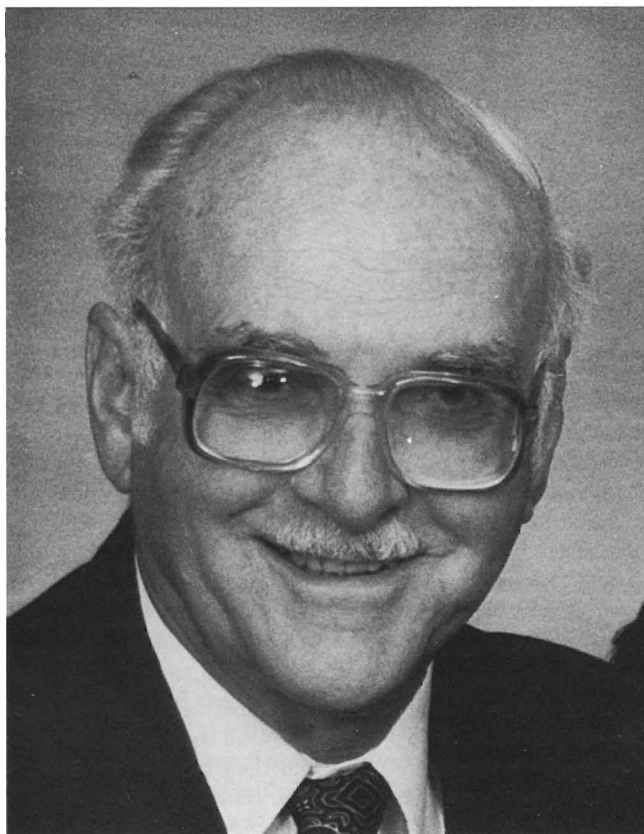


Figure 1. James Plummer Morgan, 1919-1995.



Figure 2. Dr. Morgan working in the Louisiana marshes in the late 1950s–early 1960s.

panion to Davis during his years at Berkeley, but with time, became very dubious of the Davisian doctrine. In an attempt to gain his independence, Russell moved south in the 1920s, first for a short stay in Texas and then to Louisiana State University, where he stayed for the remainder of his life. A part of his charge was to respond to Davis' request, "Russell, try to find out why the Mississippi has such a straight channel below New Orleans." It was as a partial consequence of

Russell's charge and the findings that emerged from his Louisiana work that led to the ultimate demise of the "American School of Physiography." Morgan himself was becoming very aware of this through his readings of Russell and others. Morgan was influenced by Russell's writings and, although unknown to him at the time, he would ultimately move to Louisiana State University and become one of Russell's prize students.



Figure 3. The "Marsh Rats," as they were referred to, under the supervision of "Chief," Dr. James Morgan seated at front (holding pipe) on the marsh buggy on Grand Chenier, Louisiana (circa 1949).

Few know that it was while at UC-Berkeley that Morgan was first introduced to coastal processes by a coastal engineer, Professor Murrough P. O'Brien. O'Brien hired Morgan as a student worker to wheelbarrow sand from one end of the wave tank to the other during and after laboratory experiments. In later years Morgan would recall the excitement that emanated from the "father of coastal engineering" and his colleagues and the major advances being made. He indeed attributed his early association with O'Brien as one that promoted his interest in coastal research.

BEYOND BERKELEY AND THE LSU YEARS

In 1943, Morgan graduated from Berkeley with a bachelor's degree in geology. During the following three years, he served as an aerial photo interpretation officer with the United States Army Air Corps. Although he was first exposed to coastal research by M.P. O'Brien at UC-Berkeley, it was in the Air Corps that Morgan developed an unparalleled ability to interpret coastal landforms from black and white imagery. And it was perhaps both those traits—although he seldom acknowledged the importance of his wheelbarrow skills in helping carve out his career—that drew attention at Louisiana State University.

In 1946, he and his new bride stopped off in Baton Rouge, Louisiana, during their travels through the south. The story goes, and I am sure there are variants, that while Mrs. Morgan rested in the car after a long trip, her husband entered the geology building at LSU—simply to freshen-up. While in the building he met up with Richard J. Russell and Henry Howe in the hallway by chance, and only a few minutes later he emerged from the geology complex (now the Howe-Russell Geoscience Complex) armed with a teaching assistantship, full tuition remission and the stimuli for an exciting and brilliant career. In later years he would recall that although he was delighted to get the opportunity to study under Russell, his major concern was "How to tell my wife we were moving from California to Baton Rouge the very next week."

That year, Morgan began studying towards a doctorate under the tutelage of Professor R.J. Russell, who was rapidly becoming one of the world's leading coastal and fluvial geomorphologists of the time. Russell could not divorce the importance of the dynamics of the Mississippi River from coastal processes in the Gulf of Mexico, and thus the young Morgan was given the task of elucidating the linkages.

Morgan and Russell developed a strong student-mentor relationship, and their research began unveiling some startling



Figure 4. Dr. Morgan, in his 70s, lecturing to a student while on a field trip along the Gulf coast (1991).

evidence that the Louisiana coast was eroding dramatically, and the highly productive marshes were disappearing at rates of up to 35 square miles per year (Figure 2). Their early findings began to attract international attention as well as in the state of Louisiana where the seed was set for what would flourish into the "Tidelands Litigation" (see COLEMAN *et al.*, 1998; COLEMAN and STONE, 1998; STONE and MCBRIDE, 1998 for a more detailed review). The concern generated by their preliminary findings, in addition to funding received from the Office of Naval Research, culminated in the funding of a bold proposal in 1951 to develop a world-class institute, staffed with top scientists to study the coastal erosion and marsh loss problem in Louisiana. Two years after having received his doctorate, and at the ripe old age of 34, Dr. Morgan, was named Managing Director of the Coastal Studies Institute at LSU.

The coastal scientific community turned its eyes to LSU and the Coastal Studies Institute, making Baton Rouge a port of call during trips to the United States. With several scientists vigorously working in the delta under the supervision of "Chief" (Figure 3) as he was known at the time, Morgan and Russell expanded their program and obtained funding for research on the Ganges-Brahmaputra in Bangladesh, Caribbean coastline, Brazil, Uruguay, and at home in the Gulf of Mexico, Massachusetts, the Outer Banks of North Carolina and Florida. Funding was received from the Nation-

al Science Foundation, United States Geological Survey, Office of Naval Research, United States Army Corps of Engineers, and several oil companies, to name but a few.

Dr. Morgan's research record was nothing short of exemplary at a young age and the oil companies frequently attempted to lure him from academia with the promise of embarrassingly high salaries and assorted perks. He resisted industry, for he relished the challenge of teaching in the lecture room and had become devoted to the Coastal Studies Institute and Louisiana State University. His meritorious teaching and research was rewarded in 1962 when he was promoted to full Professor of Geology. In 1966 he stepped down from the managing directorship of the Institute, to become leading scientist on research funded by the National Science Foundation and the United States Geological Survey, conducted on the Louisiana continental shelf. Toward the end of the project in 1970, he accepted chairmanship of the Department of Geology at LSU, a position he held until 1973.

After stepping down as chair, Dr. Morgan took sabbatical leave to write-up some of the data he had generated during his continental shelf research. He and his wife spent most of that time on Pensacola Beach where they developed a love for the area and made several new friends. That sabbatical helped solidify Dr. Morgan's decision to retire from LSU, and after 30 years in Baton Rouge, he and his wife relocated to Pensacola.

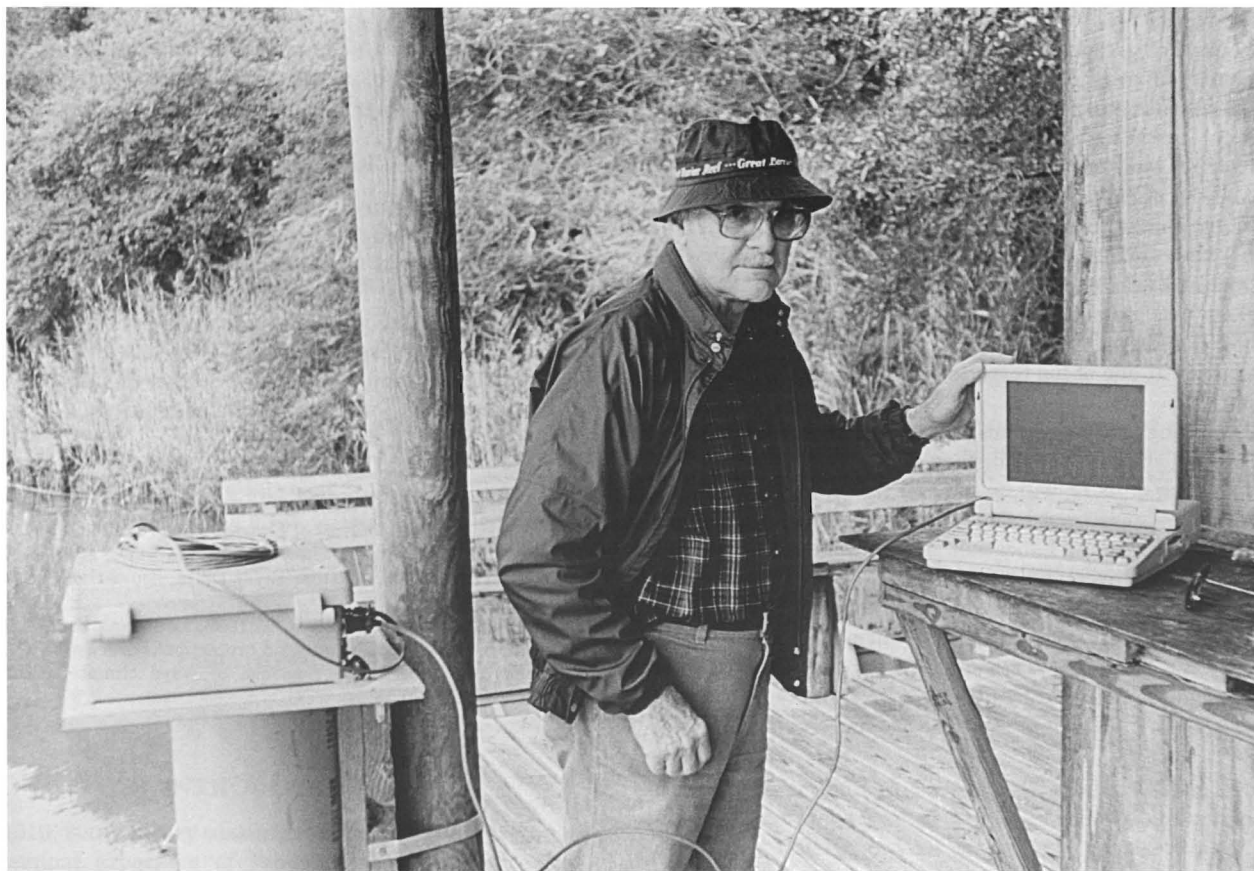


Figure 5. Dr. Morgan testing a newly-constructed tide gauge in Bayou Texar, Pensacola Florida (1990).

THE FLORIDA YEARS

The Morgans moved to their new home overlooking the Gulf of Mexico. And it was this move to the beach that took many by surprise. If anyone was sensitive to the fragility of barrier islands and their susceptibility to storm wave inundation and damage during hurricanes, it was Morgan. Morgan utilized his knowledge of beach and dune processes to create a new primary dune fronting his property. He meticulously transplanted sea oats, laboriously irrigated, fertilized, until after a few hurricane-free years, a text book example of a stable dune system evolved. Passers by would look rather strangely at the large dune structure, wondering why the retired professor and his wife would work so very hard to maintain it. Dr. Morgan would informally lecture on the importance of the dune system as a storm wave buffer. He particularly enjoyed lecturing to the next door neighbors, who were overheard as having stated "Morgan's dune building is nothing more than an exercise in futility." The years went by and hurricane activity in the Gulf was minimal. Morgan's neighbors marveled at their unobstructed view of the Gulf. It is reported, however, that "marveling" ceased on September 12, 1979, when hurricane Frederic, a powerful Class 3 hurricane, made landfall a few 10's of kilometers to the west. Morgan's dune took the full brunt of the storm surge and

wave activity and very effectively rerouted the entire accompanying storm surge to the neighbors' homes next door. Years later while reflecting on the incident he stated, with a rather mischievous grin, "They all had dunes before the next hurricane season."

Dr. Morgan used his many years of expertise and experience to advise the state of Florida and local governmental agencies on beach-related problems. He received numerous awards for his work including "The Man of the Year Award" from the Santa Rosa Island Authority in 1980; "Elks Distinguished Citizen Award" in 1981; the "Audubon Society Award" in 1987; and the "Outstanding Citizen Award" from the Florida Shore and Beach Preservation Association in 1989. Although he insisted he had retired, he taught courses in coastal geomorphology at the University of West Florida, where for 15 years he served as a faculty member and was a co-founder of the Institute for Coastal and Estuarine Research. While approaching his mid-70s, he continued to ask cogent, cutting-edge questions on coastal and deltaic processes and sedimentation (Figure 4). His mental agility and excellent physical health allowed him to write scholarly papers and work in the field (Figure 5).

During the latter part of 1994 Dr. Morgan's health began to fail. On August 26, 1995, James Plummer Morgan died

peacefully at his beach home after a short, gallant battle against cancer.

His parting greatly shocked and saddened the academic community. Just prior to his death, the University of West Florida established the James P. Morgan Award for Excellence in Coastal Research. This was one of many awards he received but one that he noticeably cherished during the last few months of his life. In 1997 the Louisiana Board of Regents contributed to a generous monetary gift given by a local oil company and established the "James P. Morgan Professorship" in the Coastal Studies Institute at LSU. The first recipient was named later that year. In that same year, "James P. Morgan Botanical Gardens" were constructed in his memory at one of his favorite sites on Santa Rosa Island, Florida.

The passing away of James P. Morgan brought to a close a wonderful chapter in the history of coastal and deltaic science. To each of us he will be remembered in different ways. He will be remembered by many for his significant contributions to science and education. The Florida and Louisiana communities will remember him for his active participation in environmental matters. He is remembered by friends for his humor, humility, kindness and warmth. He is remembered by his family as a steadfast father and devoted husband. He is remembered by little children simply as "Grand-

pa Doc." I, along with numerous other students had the privilege of studying under Dr. Morgan. He was a scientist, a humanitarian, who was humble and courageous and I, on behalf of a multitude of students and colleagues, thank him for sharing his knowledge and so much kindness over the years.

ACKNOWLEDGMENTS

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