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BRYAN PATTERSON

1909—1979

A Biographical Memoir by
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BY EVERETT C. OLSON

IT IS RARE that a scientist combines a cosmopolitan, historical world view with meticulous attention to detail, a pervasive sociability, and an Irish wit and imagination. Such a man was Professor Bryan Patterson, whose death on December 1, 1979 saddened his friends and colleagues throughout the world. Born in London, England in 1909, he made his way to Chicago, Illinois at the age of seventeen. The United States became his home, and in 1938 he became an American citizen. For about twenty years Bryan lived in the Hyde Park area of Chicago's South Side, and there he met and married Bernice Cain in 1934. He served in the armed forces of the United States during World War II. After the war the family moved to the southern suburbs and remained there until Bryan was called to Harvard in 1955.

Upon his arrival in Chicago, Bryan assumed a position as vertebrate preparator at the Field Museum of Natural History. He rose rapidly in rank, and by 1937 became curator of paleontology. Five years later he was promoted to curator of mammals, a position he held until 1955 when he left the Field Museum to become the Agassiz Professor of Vertebrate Paleontology in the Museum of Comparative Zoology, Harvard University.

A remarkable aspect of Bryan's career is that he was very

largely self-educated in science, not only in the field of vertebrate paleontology, in which he attained his greatest prominence, but also in the sister fields of geology and biology. Until his entrance into Malvern College in England, when he was fourteen years old, he was tutored at home by his mother, Frances Gray Patterson. She was a remarkable lady, the first to receive a law degree granted to a woman in the British Isles. His father, John Henry Patterson, was equally prominent in engineering. Among his many accomplishments was the planning and supervision of construction of the railroad from Nairobi, Kenya, to Uganda. It was his father's friendship with the director of the Field Museum that was instrumental in bringing Bryan to work and study at that institution. During his early years in Chicago, Bryan attended a number of courses at the University of Chicago, but he did not enter into a degree program.

Sheer dedication, energy, and brilliance, aided and encouraged by an active group of scientists in Chicago, carried Bryan rapidly to the top of his profession, both as a scientist and a leader. In 1947 he was appointed lecturer in geology at the University of Chicago, an adjunct to his Museum position. In this role he provided a moving force in the development of an interdisciplinary program in paleozoology at the University and involved the University and Museum in a tightly knit, cooperative educational venture. To enhance curation and exhibition of the fossil vertebrates and fossil plants of the Walker Museum at the University, the collections were transferred to the Field Museum. They were followed much later by the invertebrate collections. Advanced courses in vertebrate paleontology and anatomy were introduced at the Museum, and Bryan, working closely with the program, exerted a strong influence upon the graduate students in paleozoology. Later, at Harvard, his superb teaching and close rapport with students fostered a vigorous

program in mammalian paleontology, a program that numbered among its students Craig Black, Kay Behrensmeyer, Abu Baker, Roger Wood, Vince Maglio, John Wahlert, William Sill, Clayton Ray, and Craig Wood.

When Bryan first arrived at the Field Museum, he worked under the direction of Dr. Elmer S. Riggs, who was then engaged in studies of South American Tertiary mammals. Bryan's interests naturally first turned toward this field, and he initiated a series of studies that continued for the rest of his life.

The mammals of South America had evolved in nearly total isolation from the rest of the world from near the beginning of the Cenozoic Era until only a few million years ago. Among the many fascinating groups of these mammals were the Notoungulata, the southern ungulates. This varied array of hooped herbivores included some that closely paralleled North American ungulates and others that resembled no animals known elsewhere in the world. It was to this group in particular that Bryan directed his attention. By the end of the 1920s, when he entered the field, notoungulates were generally well known and understood. Work of the following years, with Bryan Patterson and George Gaylord Simpson at the forefront, was devoted to detailed studies of osteology, function, ecology, stratigraphy, and phylogeny of the various subgroups of Notoungulata. Bryan concentrated his efforts on a suite of the large ungulates from the Deseaden (Oligocene) formation of Argentina. In a masterful series of reports he provided detailed descriptions, analyses, and functional interpretations of the dental anatomy, cranial morphology, the optic region, and fossil brain casts of these extinct animals. His studies, of course, were not confined to one group of South American vertebrates but went far afield to treat South American fossil crocodiles and the great, extinct running birds, the phororhacids. His detailed

studies of the mammals as a whole laid the base for a synthesis of the mammals of South America, published in 1968 in joint authorship with Dr. Rosendo Pascual. His latest studies concerned still another group of South American mammals, the caviomorph rodents. This work, carried out in close cooperation with Professor Albert E. Wood, was continuing at the time of his death.

For all of his studies of the extinct vertebrates of South America, it was not until 1952 that Bryan found it possible to visit the continent. As a recipient of two Guggenheim fellowships he was able to spend the years of 1952–1954 in Argentina studying the great collections amassed by the Ameghino brothers. In 1958 he returned to Argentina with Professor Alfred S. Romer, but this time for field work in the Triassic formations in search of mammal-like reptiles. Much later, during 1976–1977, Bryan again made an extended stay in South America, this time at Sao Paulo, Brazil where he worked with Dr. P. E. Vanzolini.

Simultaneously with his South American studies, Bryan carried out explorations of early Tertiary formations in western Colorado, where he revealed a previously unknown sequence of Paleocene and early Eocene mammals. This venture was initiated by the accidental discovery of a jaw by Mr. Edwin S. Faber, who donated the specimen to the Field Museum. Bryan went to Colorado to check out the locality, and he continued through several field seasons to open up and excavate a number of similar sites that yielded a series of large, primitive ungulates grouped as amblypods. His descriptions and analyses of these new materials added an important chapter to the history of large mammals of the early Cenozoic. An offshot of these studies, published in 1949, was a definitive work on the evolution of a peculiar, extinct group of large mammals known as taeniodonts. This was a time when free, evolutionary speculation was the order

of the day, spurred especially by the seminal book *Tempo and Mode in Evolution* by George Gaylord Simpson (1944). Bryan carried his flair for interpretation of anatomy, feeding, and ecology into the heady framework to weave a fascinating story about one small bit of ancient life as pursued by the taeniodonts.

A hiatus marked Bryan's scientific career in the early 1940s, as was true for most of his colleagues. There was a war to be fought, and Bryan entered the Army as a private, bypassing chances for a commission that likely could have been his for the trying. He served in Europe with the U.S. Army 1st Infantry Division. Just before the final Nazi offensive effort, the "Battle of the Bulge," he was taken prisoner by the Germans while he was on a "safe" reconnaissance mission. The months with inadequate food and inactivity in the German prison camp were debilitating, but soon after his return to the United States his characteristic vigor began to reassert itself as he plunged ahead in his work in paleontology.

An unexpected discovery of the jaw of a small, primitive mammal from early Cretaceous beds gave a new direction to Bryan's work. While on a trip to El Paso for meetings of the Society of Vertebrate Paleontology (SVP), Drs. Rainer Zangerl and Robert Denison stopped off to examine some deposits in north Texas, hoping to find remains of ancient turtles. They discovered the small mammalian jaw and turned it over to Bryan for study. After several seasons of excavation and washing sediments at the site in north Texas, followed by intensive laboratory searches of the residues in Chicago, a large sample of the rare early mammalian remains was assembled. Study of these materials culminated in publication of a landmark analysis of their dentitions and a revised theory of the evolution of the molar crown patterns in therian mammals. Along similar lines, Bryan worked on

some fragmentary skull and jaw remains of a much older primitive mammal, *Sinoconodon*, from Yunnan, China. These had come into my hands through the Reverend Harold Rigney, a former student, and I asked Bryan to collaborate in their study, taking advantage of his unique understanding of early mammalian evolution. Bryan also began work on some mammal-like reptiles in the collections from Argentina made by Professor Alfred S. Romer and his party. This short-lived venture was soon supplanted by explorations of the Pliocene and Pleistocene deposits of Kenya, East Africa, a return to the site of his father's early work. The most publicized results of this work were fragments of a man-like creature of an age greater than others known at that time. More comprehensive and lasting contributions, however, involved the excellent collections of fossils, non-hominid mammals, which provided knowledge of faunas and ecology in which early man lived.

In 1970 Bryan answered an appeal from the Government of Guatemala to study and collect remains of some extinct mammals exposed at the tiny village of Estanzuela, about sixty miles from Guatemala City. The need was for an experienced museum paleontologist, a field man, who spoke Spanish and knew both North and South American mammals. Bryan obviously fitted this bill of particulars. He spent several months in Guatemala at the site, excavating, preparing, and laying out plans for a museum. The result was an excellent small museum, featuring the complete skeleton of a mastodon and duly named Museo de Paleontologia Bryan Patterson. Crowds flocked to the opening, but Bryan could not attend. When he did return on a later visit to examine the finished product, he was met and honored by the Guatemalan officials and a continuing flow of Guatemalans and foreign tourists. The museum is a monument to Bryan's

capacities to improvise and produce professionally finished products under unorthodox conditions.

Bryan's professional activities went far beyond research and teaching. For many years problems of collecting fossil vertebrates on public lands have raised difficulties between paleontologists and the federal government. Laws designed to preserve archeological sites under The Antiquities Act became applied to fossil vertebrates, to which they were less appropriate. Laws essential for protection of sites from needless depredation impinged upon the legitimate scientific studies and proper development by qualified professionals. For several years Bryan was a chief representative of the SVP in continuing efforts and prolonged negotiations to find solutions to the problems. During the postwar years he was a leader in the affairs of SVP, serving as secretary-treasurer during 1946–1947 and as president in 1948. At that time the organization was small and its members were intimately associated both scientifically and socially. Winter meetings and summer field trips brought the clan together. Bryan was a catalyst in both areas and a spur and enthusiastic participant in many of the society's sometimes bizzare ventures. He was also an active member of the Geological Society of America and the Society of Systematic Zoology. An honor richly deserved was his election to the National Academy of Sciences in 1963.

An objective biography of accomplishments cannot capture the spirit of the man or capture the joy that permeated all of his activities and overflowed abundantly onto his friends and associates. Still, his accomplishments would have been less, lacking this intangible. At the Field Museum a coterie of Bryan, Karl P. Schmidt, and Dwight D. Davis led a luncheon group where the affairs of science, the Museum, and the world were settled with rare wisdom and good

humor. It was this kind of camaraderie that Bryan missed most of all at Harvard, where tendencies to go separate ways prevailed. From Sharat Roy, chief curator of geology at the Field Museum, Bryan learned the art of curry preparation and of the libations that cooled the palates of the uninitiated. Gatherings occasioned by such skills and others of similar kind, as vertebrate paleontologists assembled across the country, were places where Bryan's immense whimsy and sense of the ridiculous surfaced to lead in affairs that have become legends in the lore of the profession.

Too few knew of his capacity for the creation and telling of long and delightful yarns, with fact and fancy mixed in oddly balanced proportions. Children from three to ten or more sat entranced by the hour as he spun tales of the thirteen-striped ground squirrel, which became indelibly fixed in the minds of the listeners as *Spermophilus tridecemlineatus*. Stories of adventures in the Wild West, with a mixture of the British-Irish tongue and Texas-talk were fare for oldsters, told around roaring fires on cold nights, when only whiskey could warm the soul, in Wyoming, Colorado, or Texas, wherever the spirit moved.

His humor was not above a "scientific hoax." While in Kenya, Bryan, spurred by a short note on the discovery of a curious, extinct six-inch-long animal named the Tully Monster, concocted a story of a dancing worm, which lived in marshes far to the south. The fossil Tully Monster had a bulbous body, a long "neck" and a dart-like tail. Although the "monster" came from ancient coal measures of Illinois, some "Nessophiles" had already suggested that it was ancestral to the elusive "Loch Ness Monster." A series of letters from "natives" of Kenya to the Field Museum, where the Tully Monster was being studied, detailed how this dancing worm, which looked so much like the Tully Monster, disported itself under the full moon, dancing across the water on its

dart-like tail. Needless to say, interest ran high, and the believers were even thinking of following this "living fossil" to its source. The hoax, however, was quelled without damage and with the greatest of good humor. The *Bulletin of the Field Museum* carried the story, with Bryan in full African hunter's garb, gun in one hand and a model of the monster in the other, as the frontispiece. The hoax was enjoyed as much by the hoaxed as the hoaxer, for no one could become angry with Bryan's skills in the execution of his puckish pranks.

All of this is gone now, but rich in our memories. Our science and our lives are poorer now that Bryan is not with us and his contributions to the understanding of the ancient life of the world have ceased. Those who knew him feel an irreplaceable loss. But we and the world are much richer for his life. He is survived by his wife Bea and his son Alan, who carry many of his traits and influences ahead in his absence.

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