



**Figure 1**

A. F. Wislizenus  
courtesy the Missouri  
Historical Society

### III. *Gambelia wislizenii* (Baird and Girard, 1852) - Long-nosed Leopard Lizard

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**L**ong-nosed leopard lizards inhabit arid to semiarid habitats from Oregon and Idaho, south through Arizona, New Mexico and on into northern Mexico. They are voracious predators, taking not only the typical lizard fare of crickets and grasshoppers, but also small vertebrates, such as lizards and mice. One of my most memorable encounters with this species occurred in the 1960s on a field trip to Beaver Dam Wash in the Mojave Desert of Southeastern Utah. While resting on a hillside, I noticed a large, adult Leopard lizard moving in slow, deliberate fashion, along the edge of a wash. The suffusion of orange color on the lizard's face, neck, and body indicated a female in breeding condition. Using my binoculars, I watched the

lizard's progress for several minutes. Suddenly, with a swirl of dust, another lizard bounded out from the shade of a small shrub colliding with the female at full throttle. Due to the dust surrounding the encounter, it was impossible from my vantage point to tell what was happening and so I rushed to the scene. Upon my arrival, the late-comer (presumably a male) was biting the female's neck and had its tail curled under her posterior (either "in copulo" or trying to be) - so much for courtship among Leopard lizards. The female, deciding not to tolerate further indignities, wrenched free of the male and disappeared at bipedal "warp speed" (or there about). However, I succeeded in grabbing the male, who expressed his displeasure at my intrusion by gaping his ample maw and displaying the jet black lining of his mouth and throat. Feeling

somewhat chagrined at my callousness, I immediately released the testy suitor to seek love another day.  
*Cherchez la femme.*

*Gambelia wislizenii* is a taxonomic oddity comprising a double patronym. The generic name honors William Gambel, an assistant curator at the prestigious Academy of Natural Sciences in Philadelphia. The specific epithet honors Adolph Wislizenus, an adventurous physician from St. Louis. Herein we will delve into the history of how the names of these two very different 19<sup>th</sup> century naturalists came to be linked on the scientific name of a feisty, western lizard. The Long-nosed leopard lizard was first described in 1852 by Spencer F. Baird (Assistant Secretary of the Smithsonian Institution) and Charles Girard (Baird's chief assistant) in their review of the reptiles collected during the exploration and survey of the valley of the Great Salt Lake lead by Howard Stansbury. However, the type specimen had nothing to do with the Stansbury Expedition; rather it had been collected near Santa Fe, New Mexico around the time of the Mexican War. It was named *Crotaphytus wislizenii* in honor of the army surgeon who collected it, Friedrich Wislizenus and was figured in plate III. Later that same year Baird and Girard described another similar lizard, as *Crotaphytus gambelii*. This specimen had been collected by William Gambel on his last trip to California, but no precise locality data were available. By 1859 in the report, *Reptiles of the Boundary*, Baird had apparently decided that *C. wislizenii* and *C. gambelii* were the same species and listed the latter in the synonymy of *Crotaphytus wislizenii*. However, within this same publication in a short discussion under *Crotaphytus reticulatus*, Baird stated that *reticulatus* was "More closely related to *Crotaphytus collaris* than to *Crotaphytus (Gambelia) wislizenii*." It is unclear whether Baird was indicating that *wislizenii* was a different subgroup from other *Crotaphytus* but this is how Hobart M. Smith interpreted usage of the name, *Gambelia*, in parentheses. In his 1946 *Handbook of Lizards*, Smith separated *Gambelia* from *Crotaphytus*. His source for the name *Gambelia* was the aforementioned usage by Spencer Baird. Thus *Gambelia wislizenii* become a lizard burdened to carry two patronyms. The pendulum of taxonomic nomenclature continues to swing back and forth between *Gambelia* and *Crotaphytus*, but for now, the former is the accepted genus for Leopard lizards. Today, the genus *Gambelia* includes two additional species: the Blunt-nosed leopard lizard (*G. sila*) and Cope's leopard lizard (*G. copeii*).

Frederick Adolph Wislizenus was born in Koenigsee, Schwarzburg-Rudolstadt, Germany in 1810. Emigrating to the United States in 1835 following an unsuccessful student uprising in which he participated, Wislizenus settled in Illinois near St. Louis and set up a medical practice. However, this

physician was not one to let grass grow between his toes. Succumbing to wanderlust, he joined a cadre of fur traders traveling the Oregon Trail in 1839. Wislizenus accompanied them as far as Idaho; then he joined another party that traveled through Colorado to Bert's Fort on the Santa Fe Trail, and from there he returned to St. Louis. A result of this journey was a book entitled *A Journey to The Rocky Mountains in the Year 1839*. While not a confirmed naturalist, Wislizenus had made the acquaintance of the celebrated botanist George Englemann who had instilled in him the importance of making collections and natural history observations when traveling. Apparently no herps were collected on this journey. However, he did describe a "horned frog" that he correctly identified as a lizard and which appears to have been *Phrynosoma cornutum*.

By 1846, Wislizenus was ready to go again. Joining a group of traders, he traveled to Santa Fe and then on to Chihuahua. This was a troubled time, just before the outbreak of the Mexican War and the U.S. Army was suspicious that any party of traders heading from Mexico might be carrying arms. According to one account, Wislizenus's group was pursued by an attachment of soldiers led by Colonel Stephen Kearney, commander of the Army of the West, but they reached Mexico safely. However, it was out of the frying pan and into the fire, for they were immediately taken as prisoners of war by the Mexicans and were interred at a camp in the Sierra Madre Occidental. Apparently Wislizenus was not considered to be too much of a threat to Mexican security as he was permitted to wander up to two leagues away from the prison camp, in order to collect plants, many of which are still rarities in herbaria. Eventually, he was rescued by a company of U.S. troops. Indebted to the army for the rescue, he then joined them for a time as a surgeon before returning to St. Louis. Sometime during this adventure, Wislizenus collected the type specimen of the Long-nosed leopard lizard\*. His adventures on this trip were later published in an 1848 government report entitled *Tour Through Northern Mexico* which included a section by George Englemann, describing the unusual plants collected. Following this adventure, Wislizenus married and settled down in St. Louis. He became a respected pillar of the community helping to found the Missouri Historical Society and the Academy of Science of St. Louis. Scientists named several new species after him. In addition to the Long-nosed leopard lizard, Asa Gray, the famous Harvard botanist, added the legume, *Dalea wislizeni*, and Augustine de Candolle, the Swiss botanist, described an oak as *Quercus wislizenii*. Presumably, these scientists thought highly of Wislizenus. However, one need wonder

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about his mentor, George Englemann, who named *Wislizenia refracta*, the jackass clover in his honor.

Born in 1821, William Gambel was another adventurer, but with more naturalist training than Wislizenus. His was an aborted but productive career. At 19 he trained under the renowned naturalist Thomas Nuttall in Philadelphia. By 1841 Nuttall decided Gambel was ready to procure specimens for the Academy of Natural Sciences of Philadelphia and encouraged him to join a party of trappers bound for the southern Rockies. They followed the Santa Fe trail to New Mexico, traveled through Colorado and finally reached San Pedro, California. While on the coast, Gambel obtained employment as a personal secretary to several U.S. naval commanders. In this capacity, he was able to sail up and down the California Coast and collect whenever he had shore leave. Gambel was most into ornithology but Nuttall had taught him the importance of general collecting and all of the techniques needed to preserve specimens. He collected birds, plants and, of course, herps. He returned to Philadelphia in 1845 by sailing round the Horn and immediately set to work describing his excellently preserved bird collections. He was given the title of assistant curator at the prestigious Academy. However, Gambel made, what proved to be, a fatal error. He gained the ire of John Cassin, his superior in the Academy, by naming an auklet in his honor only to find that it had been previously named by a German naturalist in 1911. Without Cassin's support, Gambel saw that he would never advance to curator at the Academy and thus set out on a new course in life. He qualified to practice medicine, married, and decided to settle in San Francisco. Sadly, Gambel never completed his trip to San Francisco. After crossing the treacherous, snow-covered Sierra Nevadas in mid winter, he stopped to aid sick miners at the Rio de las Plumas. Here he contracted typhoid fever and died at 26 years of age.

Despite his young age, Gambel's scientific contributions were substantial. Based on his publications, he was the authority on birds of the West Coast at the time of his death. In addition to the Leopard Lizards, several organisms that he collected have been named in his honor. Among these are Gambel's quail (*Callipella gambelii*), the Mountain chickadee (*Parus gambeli*), Gambel's oak (*Quercus gambelii*), and the Showy island snapdragon (*Gambelia speciosa*).

So we conclude that while two patronyms may be lot of baggage to lug around, the Long-nosed leopard lizard can be justly proud of being christened in honor of two such distinguished pioneers in the natural history of Western United States.

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## Cluster Amplexus 2003!

Greetings, Toad Lovers, Insomniacs, and Heliophobes! The summer rains will soon be here and, yes, we are preparing for Cluster Amplexus 2003, so named because clusters of species come to the same ponds to breed at the same time. Funded by the Department of Interior's Amphibian Research and Monitoring Initiative (ARMI), this effort is part of a larger project to determine the status our native desert-breeding toads and spadefoots. We will again be conducting our surveys of amphibians at Buenos Aires National Wildlife Refuge this summer. We worked many of the bugs out of the system last summer and are excited at the prospect of including



Vocalizing Mexican Spadefoot (*Spea multiplicata*)

more species in our surveys this year. To make the surveys work, we need eight volunteers each night to assist project personnel. Though simple in concept, no one was crazy enough to attempt this logistically challenging design before our maiden voyage last summer. The results were so encouraging; we can't wait to do it again.