

his own observations of living specimens, in which he corrected Claude Gay's longstanding (1836) statement that this frog was viviparous.

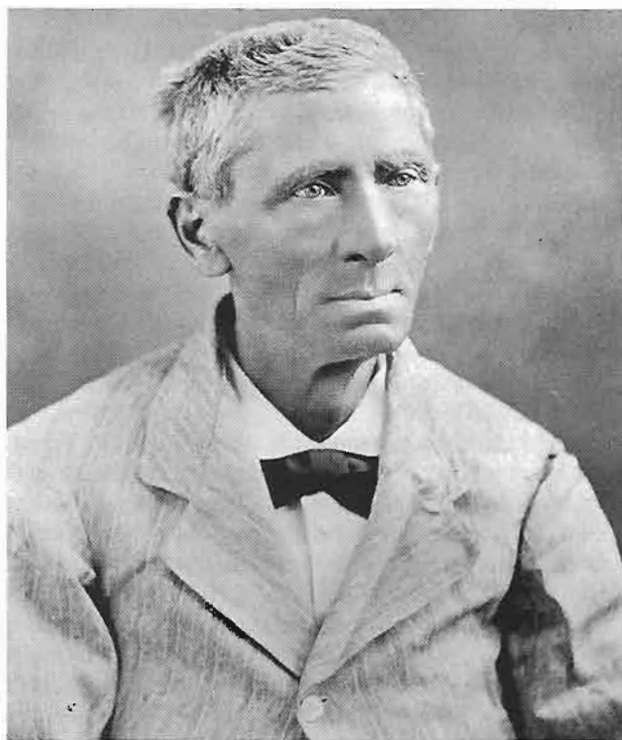
In 1875, Jiménez de la Espada issued "Vertebrados del Viaje al Pacífico . . . Batracios" (reprinted 1978), the most complete catalogue of South American frogs assembled up to that time. In this book and his shorter papers he described 38 new frogs and one salamander—the latter a mislabelled Californian species—most of which are recognized today. With no real support for his herpetological work, in 1875 he turned to the study of history and culture of the Americas and became Spain's leading expert; he published only a single additional herpetological paper (1898) which was the thesis for his Ph.D., necessary to become a full professor. He died on 3 October 1898, in Madrid, his hopes for a more extensive work on the herpetology of South America sadly never realized.

• *References*: "Biografía de D. Marcos Jiménez de la Espada (1831-1898)," by A. J. Barreiro, Tip. R. C. Menor, Madrid, 43 pages, 1927; "For Science and National Glory. The Spanish Expedition to America, 1862-1866," by R. R. Miller, Univ. Oklahoma Press, Norman, xiv, 194 pages, 1968 (Spanish transl., Ed. Serbal, Barcelona, 1983); "Marcos Jiménez de la Espada, Naturalist Explorer of the Andes and Upper Amazon Basin," by J. M. Savage, p. vii-xvi. In M. J. de la Espada, *Vertebrados del Viaje al Pacífico. Batracios*, repr. ed., Soc. Study Amphib. Rept., Athens (Ohio), 1978; R. M. Gomez and B. Sánchez, 1987 (p. 151-152). • *Portrait*: From Barreiro, 1927. • *Signature* (1869): Museo Nacional de Ciencias Naturales, Madrid, courtesy Borja Sánchez. • *Note*: The formal family name is Jiménez de la Espada, but the shortened version "Espada" traditionally has been used for him by many herpetologists.

GUNDLACH, Juan (1810-1896).

Gundlach, an eminent Cuban naturalist, was born Johannes Christopher Gundlach in Marburg, Hesse-Cassel (now Hessen, Germany), on 17 July 1810. He was interested in insects as a boy and, following the accidental blast of a shotgun that cost him his sense of smell, became a noted taxidermist, in part due to the fact that he could work with carcasses in advanced stages of decomposition. At first hired by the University of Marburg as a preparator, he later became a student there and graduated with a Ph.D. in 1837. A Cuban fellow student invited him to collect specimens in Cuba and they arrived in 1839, setting up a base of operation in Cardenas. Later, in 1852, Gundlach moved to Havana, where he met the Cuban naturalist, Felipe Poey. Together they planned explorations in eastern Cuba, where Gundlach collected in 1856-1859. During this expedition Gundlach discovered the strange xantusiid lizard, *Cricosaura typica*, which he described in 1863 with Wilhelm Peters, to whom he had sent these and other reptiles for identification.

In 1864, Gundlach established the Cuban Museum of Natural History which was later transferred to the Havana Institute. During the Cuban insurrection (1868-1878) centered in the eastern provinces, Gundlach's field work there was blocked, so he turned his attention elsewhere: to Puerto



Juan Gundlach

Rico (expeditions in 1873, 1875) and to laboratory work, including studies on metamorphosis in frogs of the genus *Eleutherodactylus*. By 1884 he was collecting in eastern Cuba again, with his last trip there in 1887 at the age of 76. He received many honors during his lifetime, from organizations in Cuba and abroad, for his studies of virtually all animal groups (except fish, which were the primary area of interest to Felipe Poey), yet he remained a singularly quiet and modest person. Gundlach died in Havana on 17 March 1896.

Gundlach's work on reptiles was only incidental to his more comprehensive exploratory work in both Cuba and Puerto Rico. His special fields of interest were birds and insects, but he also published extensively on mammals and molluscs. His few papers on herpetology were published between 1863 and 1878, and his major work, "Contribucion á la Erpetologia Cubana," was published as a book in Havana in 1880.

• *References*: "Sketch of John Gundlach," by J. Vilaró, *Pop. Sci. Month.*, 50: 691-697, 1897; "Vida y Exploraciones Zoológicas del Dr. Juan Gundlach en Cuba (1839-1896)," by C. T. Ramsden, *Mem. Soc. Cubana Hist. Nat. "Felipe Poey,"* 3: 146-168, 1918; "Johannes Gundlach, Naturforscher aus Cuba," by R. Mertens, *Lebensbild. Kurhessen Waldeck (Marburg)*, 3: 103-133, 1942; "Juan Cristóbal Gundlach," by I. Castellano Rodiles, *Publ. Soc. Cubana Hist. Nat. "Felipe Poey,"* 1: 1-11, 1960; Papavero, 1971 (pp. 181-183). • *Portrait and signature* (1864): Academy of Natural Sciences of Philadelphia, courtesy Marsha Gross.