

in 1833, the family moved to Carlisle where, in 1836, Baird entered Dickinson College at the age of 13. His interest in natural history began much earlier when he started his collection of specimens, together with his older brother William Baird, with whom he published his first papers. Before graduation (B.A. 1840, M.A. 1843) he briefly studied medicine in New York City (1841) but decided instead to devote his life to zoology. At that time there were no American institutions granting doctorates in zoology, so he engaged in extensive self instruction, supplemented by correspondence and advice from leading naturalists, especially John James Audubon with whom he began a special friendship as early as 1838, until he became Professor of Natural History at Dickinson College in 1846.

Baird's first herpetological papers, including his major paper "Revision of the North American Tailed-Batrachia" (1849 [1850]), in which the genus *Desmognathus* and several new species were named, date from his days as a professor at Dickinson College. These papers appeared at a propitious moment, both for Baird and the nation. The Smithsonian Institution, which had been founded only three years earlier, was seeking an Assistant Secretary, that is, an administrator second only to the head of the entire organization and specifically to direct the development of a research center. The authorities, impressed with Baird's publications and testimonials from leading scientists, hired him in 1850. It was a lucky choice, for there was probably no one else in America with the necessary combination of skills: solid credentials as a scientist, superb organizer, unselfish, an outstanding judge of ability in others, and enormous persuasive powers which later were used to extract large sums of money from Congress to support the museum.

The nucleus of the research center, which Baird transformed into a national museum of natural history, was twofold: the collections of the Wilkes Expedition, which had explored the Pacific Basin in 1838-1842, and Baird's own private collection. The latter was said to have required two railroad freight-cars to move to Washington. Thereafter, Baird took advantage of every opportunity to enlarge the museum's holdings. He arranged to have naturalists attached to the government's surveys in the American West and to army posts. Doubtless his father-in-law, who was Inspector-General of the Army, was helpful in these plans.

The collections returned by these surveys were enormous, and from them Baird and his assistants described a large fraction of the vertebrates of the American West. In herpetology, alone or with his chief assistant, Charles F. Girard, he named many new forms, including such genera as *Uma*, *Uta*, *Xantusia*, *Diadophis*, *Masticophis*, *Storeria*, and *Tantilla*. They named dozens of new species, especially in the genera *Bufo*, *Hyla*, *Rana*, *Cnemidophorus*, *Sceloporus*, and *Natrix* (*sensu lato*), and including many well-known lizards (*Coleonyx variegatus*, *Dipsosaurus dorsalis*, *Eumeces obsoletus*, *Gambelia wislizenii*, and *Sauromalus obesus*) and snakes (*Crotalus atrox*, *Elaphe vulpina*, *Heterodon nasicus*, and *Thamnophis elegans*). Baird assigned certain taxa exclusively to his assistants (*Phrynosoma* to Girard and



*J. Baird*

many snake genera to Robert Kennicott), and the turtles were loaned to Louis Agassiz for his monograph of American turtles (published 1857).

All told, of his nearly 1100 publications, Baird published only 43 on herpetology (1846-1880), but those in the 1850s were of greatest importance. These included reports on the amphibians and reptiles from Stansbury's expeditions to the Great Salt Lake of Utah (1852), the Wilkes Expedition (1852-1857), the Red River exploration (1853), the several Pacific Railroad Surveys (1859), and the United States-Mexican Boundary Survey (1859) in which the Gila monster (*Heloderma suspectum*) was first illustrated (although not recognized as a new species until 1869). Most of these reports were reprinted in 1978.

Baird's major *opus* in herpetology was the "Catalogue of North American Reptiles in the Museum of the Smithsonian Institution" (1853), co-authored with Girard. Only part one, on snakes, ever appeared, due to the pressure of other duties. More than 2000 specimens were assembled for this project and were first individually labelled with locality data, then put into one huge pile before they were sorted into species. Unfortunately, Baird's monographs of the amphibians and reptiles of the United States were never published, but the manuscripts were turned over to another of his protégés, Edward D. Cope, who based two of his own books on them (published 1889 and 1900).