



**Figure 1.**  
 Samuel Washington  
 Woodhouse (1821 - 1904):  
 1850 photo taken during  
 the Creek and Cherokee  
 Boundary Survey (from  
 Hume, 1942).

## VI. *Bufo woodhousii*, Girard 1854 – Woodhouse’s Toad

**Edward O. Moll**

Adjunct Professor  
 School of Renewable Natural Resources  
 University of Arizona

***Toads are nice people.* (Doris Cochran, National Geographic, May 1932)**

The above tribute to toads appeared as a caption to a photograph that Dr. Cochran, a long time curator of herpetological collections at the U. S. National Museum, included in a popular article about Anurans. My colleague, Ron Altig, later entitled a 1972 book on his herpetological adventures by the same caption. Obviously Cochran and Altig fancied these inoffensive and economically valuable arthropodivores. I also confess to being partial to toads. Just looking at a large, fat toad’s smug and deceptively wise countenance never fails to make me smile. However, beauty is in

the eye of the beholder and others find toads not only ugly but loathsome. Such persons see a squat, slovenly creature covered with warts that drinks water through its thighs and eats its own skin — yuck! Further damaging to their popularity is that each monsoon, these love-sick amphibians gather at ditches and ponds to caterwaul in cacophonous choruses as decent people struggle to sleep. Probably it was someone of this anti-bufonic persuasion that created the bumper sticker stating, “Eat a toad for breakfast and nothing worse can happen to you the rest of the day.”

There is no denying that toads have a definite PR problem and could be considered the Rodney Dangerfields of the amphibian world. We will probably

never know how this month's protagonist, Samuel Woodhouse, felt about having a toad named in his honor. Probably, he did not list this distinction at the top of his accomplishment's list. Certainly within the THS, we are likely to find a dichotomy of views concerning toad patronyms. For example, our esteemed editor would likely be proud as punch to have a toad named *Bufo endersoni*, whereas other more reptilian-inclined members might consider such an 'honor' mortifying (for example, consider *Bufo reppi*). In Woodhouse's case the patronym almost never happened. In 1852, Edward Hallowell, an M. D. and member of the Philadelphia Academy of Natural Sciences, first described the toad that Woodhouse had collected in the San Francisco Mountains of northern Arizona in 1851. Hallowell wrote: "Too much praise could not be awarded to Dr. Woodhouse, for the zeal and intelligent industry he has manifested in the performance of his arduous duties as physician and naturalist to the Expedition." Then he proceeded to name the toad *Bufo dorsalis* not *Bufo woodhousii*. Subsequently, this name turned out to be preoccupied and thus unavailable, providing Woodhouse another chance to be a toad's namesake. In an 1854 review of North American bufonids, Charles Girard, Spencer Baird's sidekick at the Smithsonian, made it happen, and henceforth, the species has carried the handle, *Bufo woodhousii*.

Our featured herp this month is a 2 to 5 inch long toad. As defined for most of my herpetological career, this species ranged from the East Coast westward through the central and intermountain states and into northern Mexico, making it the most widespread bufonid in North America. However, these are times when no species is safe. The molecular taxonomists have recently struck with a vengeance and what was *B. woodhousii* could eventually spawn 5 species (see Crother et al., et al. et al., 2003). I plan to wait for the smoke to clear before worrying about such interlopers, however. Habitats of this euryoecious toad are highly varied including mountain canyons, flood plains, marshes, farmlands, gardens, and residential areas. The male's call (a 'w-a-a-a-a-h,' reminiscent of a bawling calf) is one of the characteristic sounds of spring for much of the country. During the two to three week breeding period, females lay thousands of eggs in long gelatinous strings (28,493 eggs were found in a female from Oklahoma). The toad is a voracious feeder of arthropods, sometimes eating up to two-thirds of its weight in a day.

The toad's namesake, Samuel Washington Woodhouse, collector of the type specimen, was a physician, naturalist, and adventurer who participated in 3 expeditions to the American West during the mid 19<sup>th</sup> century. Woodhouse's stint as an army surgeon/naturalist in the pioneer west began in 1849 when he

signed on to accompany a government boundary survey under Brevet Capt. Lorenzo Sitgreaves into Indian Territory (Oklahoma) to determine the limits of the Creek Reservation. Thus began a trend of physician/naturalists accompanying various government boundary surveys, and transcontinental railroad surveys that proliferated in the 1850s. When he died in 1904, Woodhouse was the last survivor of this group of Acting Assistant Surgeons, United States Army, that contributed so much to the natural history of western United States.

Woodhouse was born on June 21, 1821 in Philadelphia, the early hub of natural history studies in the western world. Influenced by these environs and with a great fondness for the outdoors, he developed an interest in natural history early in life. Before long, he was spending much of his free time at the vaunted Philadelphia Academy of Natural Sciences where he came to know many of the foremost ornithologists of the day. Although his original inclination was to take up farming, Woodhouse pursued his natural history interests by collecting birds and developing his skills in taxidermy. Following a serious illness, he decided that neither farming nor natural history would provide him the livelihood that he desired. Instead he took up the study of medicine, graduating from the University of Pennsylvania as a Doctor of Medicine in 1847. Over the next year, Woodhouse served as an assistant resident physician in a Philadelphia hospital.

Natural history was not forgotten, however, and Woodhouse soon had an opportunity to pursue field studies in ornithology/natural history. Colonel J. J. Abert of the Topographical Engineers, U. S. Army, contacted the Philadelphia Academy of Sciences requesting a young physician to serve as surgeon/naturalist on a government expedition to survey the boundary separating Creek and Cherokee lands in Oklahoma. Woodhouse was recommended by the Academy for the job and he readily accepted the appointment as an Assistant Surgeon in the Army. This proved to be the first of three consecutive expeditions to the pioneer west for Woodhouse. The survey of the Creek boundary required two separate expeditions (1849, 1850) and in 1851 he participated in a third expedition to reconnoiter lands recently obtained from Mexico along the Zuni and Colorado Rivers. Lorenzo Sitgreaves led the 1849 and 1851 expeditions and Isaac Woodruff the 1850 stint.

The first two expeditions were not very demanding. Based on his journals, Woodhouse periodically had to deal with cases of severe illness (such as cholera) but much of his time was spent in more enjoyable pursuits, such as collecting, hunting, and flirting with the local Indian ladies. He was especially taken by a twenty-four year old Cherokee beauty named Calato (whom he refers to in his journal as the "flower of the Verdegris"). Although Woodhouse

---

There is no denying that toads have a definite PR problem and could be considered the Rodney Dangerfields of the amphibian world.

---

---

On their way from Santa Fe to Zuni Pueblo, the party passed El Morro Rock and on August 30, Sitgreaves, Richard Kern (the expedition artist and Woodhouse's carousing buddy) and Woodhouse scratched their names on the northeast face of the famous landmark.

---

made numerous visits to her home, nothing came of this infatuation and Calato eventually married John Stapler from Wilmington, Delaware with whom she had four children. Conversely, Woodhouse remained a confirmed bachelor until the age of 51.

The 1851 expedition down the Zuni and Colorado Rivers to explore lands recently acquired from Mexico proved to be far more dangerous and demanding than the previous field work. With shortages of food and water, a rattlesnake bite, and hostile Indians, Woodhouse probably felt fortunate just to survive. The expedition officially began in Santa Fe on August 13, although Woodhouse had been collecting specimens and making observations on his trip out from San Antonio, Texas. On their way from Santa Fe to Zuni Pueblo, the party passed El Morro Rock and on August 30, Sitgreaves, Richard Kern (the expedition artist and Woodhouse's carousing buddy) and Woodhouse scratched their names on the northeast face of the famous landmark. They arrived at Zuni Pueblo on September 1 and things soon began to go wrong. They were forced to wait for their army escort until September 24 and thus had to use up quantities of their limited supplies before departing. The lack of sufficient supplies plagued them throughout the trip.

During this delay, Woodhouse received a serious bite from a *Crotalus viridis*. In an attempt to collect the snake, he broke its back by striking it with a ramrod. He then grabbed the writhing snake too far behind the head and it sank a fang into his left index finger, resulting in immediate and severe pain. Over the next several days, Woodhouse treated himself by applying a ligature, lacerating the wound, sucking out the venom, drinking ammonia water, taking Dover's powders, applying flax seed poultices, and (on the advice of his buddy, Kern) getting drunk on whiskey and brandy. Whether any of these treatments actually worked is debatable, but the patient/doctor survived even though his left hand had limited use for the remainder of the trip. Woodhouse stated in the report of the natural history of the trip that "I did not recover the use of my left hand for months afterward, and this accounts for the small collection of birds, quadrupeds, and reptiles procured by me west of this place, being entirely dependent upon the exertions of the men." Fortunately, toad collecting does not require much speed or dexterity or I might now be penning a different pioneer's patronym story.

Upon leaving Zuni, the party reached the Little Colorado River in four days. They followed the river to its Grand Falls, then turned westward to the San Francisco Mountains. Somewhere in these mountains, the type specimen of *Bufo woodhousii* was collected. Apparently Woodhouse did not consider the event significant enough to record in his report on the natural history of the trip. They went on to cross the Black

Mountains through Union Pass and reached the Colorado River. Up to this point, rough terrain and water and food shortages were the main problems for the party; thereafter encounters with hostile Indians added further to their misery. Skirmishes with the latter resulted with the wounding and deaths of several members of the party. Woodhouse himself was wounded by a Mohave arrow in the leg as they were encamped on the Colorado River. Fortunately it was not serious. Finally on November 30, the expedition stumbled into Camp Independence, an almost abandoned post near the confluence of the Gila and Colorado Rivers. Following a rest of several days the party left for San Diego which they reached on December 18. Here Woodhouse and Kern spent a month of R&R, frequenting the old Mexican quarter of San Diego, and paying visits to homes of various Americans living in the city. Woodhouse soon became infatuated with one of the American ladies to whom he referred only as the "belle of San Diego." This romance also fizzled as the expedition party had to depart for San Francisco to catch the boat home.

Upon his return to Philadelphia, Woodhouse prepared reports on the general natural history observed on the expedition, along with the mammals and birds collected. He described six new birds and six new mammals in these accounts, including Cassin's Sparrow and Abert's Squirrel. Spencer Baird and Charles Girard described the fishes. Edward Hallowell reported on the amphibians and reptiles of all three of Woodhouse's expeditions. These accounts are published in the 1853 report of the expedition by Captain L. Sitgreaves.

The Hallowell report included 29 species of lizards, 19 snakes and 4 amphibians collected on the three expeditions. The following were described as new: Creek Boundary — *Tropidonotus rhombifera* (= *Nerodia rhombifera rhombifera*), *Tropidonotus transversus* and *T. woodhousii* (= *Nerodia erythrogaster transversa*), *Psammophis flavi-gularis* (= *Masticophis flagellum testaceus*), and *Caudisoma lecontei* (= *Crotalus viridis*). Zuni/ Colorado — *Sceloporus delicatissimus* and *S. marmoratus* (= *S. variabilis marmoratus*), *Crotaphytus fasciatus* (= ?), *Phrynosoma planiceps* (= *P. cornutum*), *Elgaria marginata* (= *E. kingi*), *Pityophis affinis* (= *Pituophis catenifer affinis*), *Ambystoma nebulosum* (*A. tigrinum nebulosum*) and of course *Bufo dorsalis* (= *B. woodhousii*).

Woodhouse's last hurrah as a field biologist took place in 1853 and 1854 when he accompanied an expedition to Nicaragua investigating the feasibility of building a railroad line from the Atlantic to the Pacific Coasts. He collected only a few specimens on this trip and wrote no formal report on his findings. After returning from Central America, Woodhouse devoted the remainder of his professional life to practicing medicine.

Despite ending his involvement with natural history study, Woodhouse continued to be recognized by the scientific world. Several additional species were named in his honor including a woodpecker, a watersnake, and a daisy. In 1860 he was elected to the ornithology committee of the Academy of Natural Sciences along with John Cassin and Thomas B. Wilson. Late in life Woodhouse developed a resurgence of interest in natural history, attending the congresses of the American Ornithologists Union in 1899 and 1903. He also started attending the meetings of the Delaware Valley Ornithological Club where he regaled his younger colleagues with reminiscences of hostile Indians, rattlesnakes, and other challenges of doing natural history in the old days. His last meeting was October 6, 1904. Although appearing healthy at the time, on November 23, the last physician/naturalist of the pioneer days died at age 83.

#### SOURCES:

- Crother, B. I. and Colleagues. 2003. Scientific and standard English names of amphibians and reptiles of North America north of Mexico. *Herpetol. Rev.* 34: 196-203.
- Girard, C. 1854. A list of the North American Bufonids, with diagnoses of new species. *Proc. Acad. Natural Sciences of Philadelphia*, 7: 86-88.
- Hallowell, E. 1852. Descriptions of new species of reptiles inhabiting North America. *Proc. Acad. of Natural Sciences of Philadelphia*, 6: 176-182.
- Hume, E.E. 1942. *Ornithologists of the United States Army Medical Corps*. The Johns Hopkins Press, Baltimore.
- Sitgreaves, L. 1853. Report of an expedition down the Zuni and Colorado Rivers. U.S. Senate Executive Document 59. Washington D.C. Reprinted 1962, Rio Grande Press, Chicago.
- Stebbins, R.C. 2003. A field guide to western reptiles and amphibians. The Peterson Field Guide Series, Houghton Mifflin Co. Boston.
- Stone, W. 1905. Dr. Samuel Washington Woodhouse (obituary). *Auk*, 22: 104-106.
- Tomer, J.S. and M.J. Brodhead (eds.). 1992. A naturalist in Indian territory. The journals of S.W. Woodhouse, 1849-50. University of Oklahoma Press, Norman.

Editor's errata:

December's *Patronym* article (*Crotalus pricei*) had mistakenly labeled Fig. 2 as John Van Denburgh when in fact it was the source of patronym himself W. Price. Apologies to the author.

#### Joseph Sacco

Arizona Game & Fish Department, Sonoita.

Edward M. Chapman, 64, of Miami, Florida was cited on 8/22/03 for taking and possessing unlawfully taken wildlife and taking wildlife during the closed season. Chapman was collecting reptiles on the Mt. Hopkins Road in the Santa Rita Mountains when his vehicle was stopped by Game and Fish Officers Joe Sacco and Hans Koenig. During a consent search of Chapman's truck, a Gila monster crawled out from the bed of the truck and fell off the tailgate, landing at the officer's feet.

During his trial on 12/5/03 in the Santa Cruz County Justice Court, Chapman denied that he had been in possession of the lizard. He testified that during the vehicle stop, the Gila monster had come out of the brush and bit his shoe. He said that he shook it off and it landed at the feet of Officer Koenig. Representing the State, Assistant County Attorney Susan Supp told the court that the Gila monster was a decoy that had actually been picked up off of the road by Chapman and placed in his vehicle about 10 minutes prior to the stop. In later testimony, Wildlife Biologist Tim Snow told the court that the Reticulate Gila monster nicknamed "Sparkie", had in fact been fitted with a microchip identifying it as property of the Game and Fish Department.

Chapman, a licensed Commercial Reptile Dealer in Florida, was found guilty and fined \$580.00. As part of his sentencing, he was given 180 days probation during which time he is prohibited from taking any wildlife in Arizona. Civil Revocation proceedings are pending.