

A Much-Belated Obituary of an Important American Zoo Collector, with Discussion of the Type Locality for *Bogertophis subocularis* and *Lampropeltis alterna*

“Who knows the life of Meyenberg,
Brown’s collector?”
—Wright and Wright (1957)

In 1882, British cobbler and amateur naturalist Walter Drawbridge Crick sent Charles Darwin a beetle he had collected. The beetle had a small clam attached to its leg, and the discovery of this beetle helped to explain the mysterious migrations of freshwater bivalves from one pond to another, which was an important question at the time and also the subject of Darwin’s last publication before his death. Remarkably, the collector of this beetle-hitchhiking clam indirectly linked Darwin to the discovery of the structure of DNA—Walter Drawbridge Crick was the grandfather of Francis Crick. Walter Crick died in 1903, but Darwin’s rather interesting link to the co-discoverer of the DNA structure was not known until 2004 (Ridley 2004).

It is unfortunate that the names and lives of amateur naturalists and collectors who make important contributions to science often remain obscure. Such is the case of another amateur naturalist and businessman, a dealer in leather products (in this instance, saddles), who in 1901 sent to Arthur Erwin Brown (Fig. 1), the second director of America’s first zoo (Philadelphia), two species of snakes unknown to science at the time (Brown 1901a, b). In terms of lizard and snake species richness, the Chihuahuan Desert (source of the new snakes) is the veritable epicenter of squamate diversity in the United States, Canada, and northern Mexico (Hoekstra et al. 2010). The two undescribed species sent to Brown arguably are the two most iconic species of this region: the Trans-Pecos Ratsnake (*Bogertophis subocularis*) and the Gray-banded Kingsnake (*Lampropeltis alterna*). Both species have graced the covers, title pages, and endpapers of the many books and field guides of the region’s herpetofauna. Despite his important discoveries, the collector’s first name has not been known to the herpetological world for the past 111 years. Brown and others mentioned him in a number of publications only as “Mr. E. Meyenberg of Pecos, Texas.”

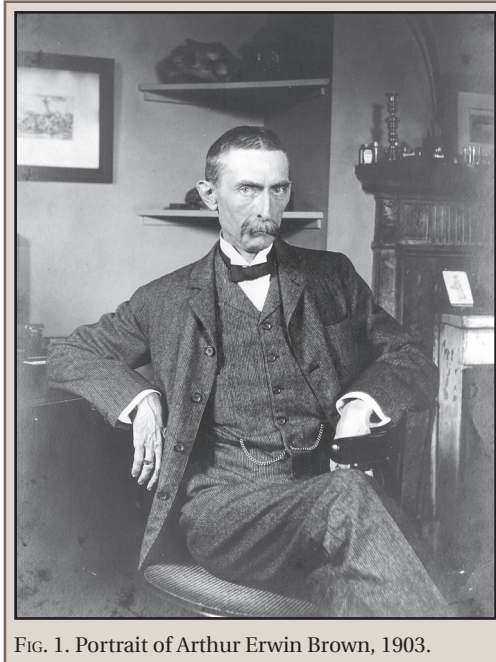


FIG. 1. Portrait of Arthur Erwin Brown, 1903.

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Undoubtedly, many students of reptiles and amphibians have read Carl Kauffeld’s story of his yearnings to travel to the Chihuahuan Desert of West Texas to look for *subocularis*. Kauffeld stated that from boyhood he could recite from memory Raymond Ditmars’ account of the species:

“Thus far, taken only in the Davis Mountains, southwest of Pecos, Texas...Less than a dozen specimens exist in collections.” (Ditmars 1907 in Kauffeld 1969).

What perhaps is less generally known—and left out of the Kauffeld account—is that the very next line in Ditmars’ book reads, “The collector of all these specimens, Mr. E. Meyenberg, is dead.” We wanted to know more about E. Meyenberg and how he died.

Edmund Meyenberg was born to Julius Meyenberg and Kunigunde Oske Meyenberg on 25 January 1859 on a farm in Fayette County, Texas in the Bluff Community of La Grange, south of Buckner’s Creek. His father, Julius, was a doctor, apothecary, and an amateur naturalist who held “one of the finest collections of insects and butterflies as is hardly equaled by the great institutions of learning in this country” (Lotto 1902: 277).

Brown reports that Edmund Meyenberg was a collector for the Zoological Society of Philadelphia. He collected and donated to the Society no less than 48 species and subspecies of reptiles from the vicinity of Pecos, Texas and also from the Davis Mountains. He collected and donated a variety of other vertebrates including multiple species of rodents, bats, passerine birds, and raptors (Brown 1902; 1903a; 1903b; 1904). Ditmars praised Meyenberg as a prolific collector of the Trans-Pecos region where he “did such good work” (Ditmars 1907). Indeed, Meyenberg supplied Ditmars and the Bronx Zoo (then the New York Zoological Park and now the Wildlife Conservation Society) with two richly colored orange-yellow and pinkish specimens of *Bogertophis subocularis* from the Davis Mountains (Brown 1903b; Ditmars 1907).

Little has been published as to the likely whereabouts of Meyenberg’s collection site for the type specimens of *B. subocularis* and *L. alterna*. Suitable for the time but cryptic and outdated by today’s standards of locality referencing, Brown reported that the *B. subocularis* specimens were found in “the Davis Mountains, fifty miles southwest of Pecos, near the head of Toyah Creek...Jeff Davis County” (Brown 1901a) and that the *L. alterna* specimen “came from the same locality...as the lately described [*Bogertophis*] *subocularis*” (Brown 1901b). The head of Toyah Creek rises at 30.92877°N, 103.81436°W at 1.65 miles (2.65 km) southwest

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of Toyahvale in Reeves County and runs northeast for 50 miles (80.5 km) to its mouth on the Pecos River just outside of Pecos, in north central Reeves County (at 31.41301°N, 103.32725°W). Both of us (DDR and GTS) have independently come to the same conclusion—that this would likely place the type locality for these snakes in the northeastern quadrant of the Davis Mountains of Jeff Davis County in the vicinity of Madera Canyon, Little Aguja Canyon, and Big Aguja Canyon (Fig. 2), all of which flow into Toyah Creek and very close to what is now the entrance of the Buffalo Trail Boy Scout Ranch on FM 1832, roughly 11 miles (17.7 km) driving from Highway 17 in Jeff Davis County, Texas. These canyons would have been likely places for watering a horse near the headwaters of the Toyah Creek, indeed, one of the only places to do so “fifty miles southwest of Pecos” in Jeff Davis County (Brown 1901a), with the exception of San Solomon Spring (at present-day Balmorhea State Park at Toyahvale, Reeves County) which is located along the presumed route of Meyenberg’s travel and approximately 40 miles (64.4 km) from Pecos.

Vernon Bailey criticized Meyenberg for not reporting reliable locality information for specimens that he allegedly found near the Guadalupe Mountains (Bailey 1905), but reported them to Brown as collected “in the neighborhood...at Pecos” (Brown 1903b). Though Meyenberg reported some of his collection localities from the vicinity of Pecos, it should be noted that his Davis Mountains collections were never questioned as to their true origins. Furthermore, both the photos and descriptions of the type specimens are characteristic of the geographic phenotypes recorded for both species from this locality. As briefly noted above, Ditmars described one of the zoological park’s *B. subocularis* on display, stating, “The ground-colour was pinkish and the blotches sooty-black” (Ditmars 1907). In this part of the Davis Mountains, the terrain is strewn with Gomez Tuff, a 36.7 million-year-old layer of rhyolite composed of cemented volcanic ash, as well as basalt, which is a dark yellowish-brown, igneous rock. Weathered Gomez Tuff is dark reddish-brown or dark chocolate brown, and fresher surfaces of the tuff are pink (MacLeod 2005). There is strong natural selection for background color-matching in squamate reptiles (Norris and Lowe 1964), and dark brown, brownish-orange, pink, and reddish specimens with rich black markings have been regularly observed in several species of snakes in the northeastern Davis Mountains. These include *Crotalus lepidus* (Price 2009; Werler and Dixon 2000), *Pantherophis bairdi* (Hiatt 2005; Rhoads 2008), *B. subocularis* (Price 2006; Rhoads 2008; GTS, D. Salceies, and C. Trumbower, pers. obs.), and the *L. alterna* of this area are often of dark brown ground-color with a salmon pink or orangish blush suffused throughout (see Figs. 3 and 4; Tennant et al. 1998; also see northeastern Davis Mountains *L. alterna* examples in Merker and Merker 2005; *B. subocularis* examples in Rhoads 2008). Moreover, the type specimen of *L. alterna* collected by Meyenberg (Fig. 5) resembles the darker, busier-patterned specimens that inhabit the northeastern Davis Mountains (Fig. 3), as do also the thicker, dark H’s of the type specimen for *B. subocularis* (DDR, pers. obs.).

Meyenberg was a well-connected and respected citizen in Pecos. He remained a proprietor of a saddlery in Pecos for about 10 years up until his death. He was a business owner at a time when the town had earned a reputation for violence after several gunfights occurred there. In fact, things got so rough during this time that a new slang word was coined; as one pair of historians put it: “To ‘pecos’ someone meant to ambush a man, steal his horse and money, kill him, and roll his body off down a

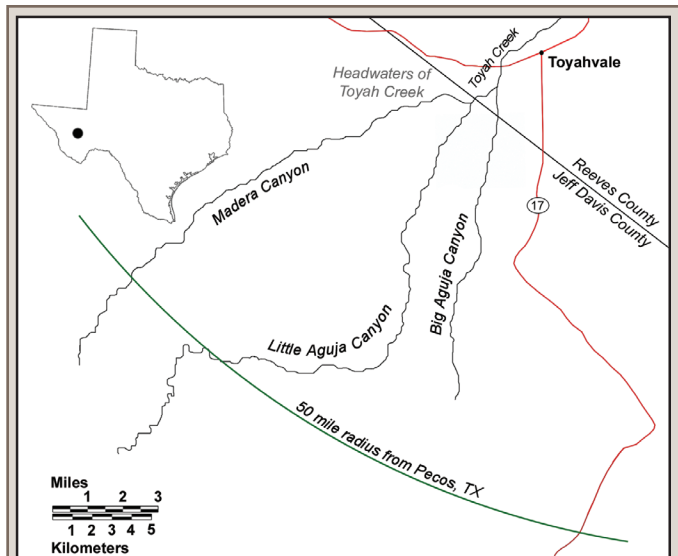


FIG. 2. Map of presumed region of the type localities for *Bogertophis subocularis* and *Lampropeltis alterna*.



FIG. 3. *Lampropeltis alterna* adult male, Little Aguja Canyon, Davis Mountains, Jeff Davis County, Texas.



FIG. 4. *Bogertophis subocularis* adult male, from Big Aguja Canyon, Davis Mountains, Jeff Davis County, Texas.



FIG. 5. Photograph of the then-living type specimen of Gray-banded Kingsnake *Lampropeltis alterna* that Meyenberg sent to Arthur Erwin Brown, taken by R. D. Carson, Brown's photographer, in 1901, and published by Conant (1957).

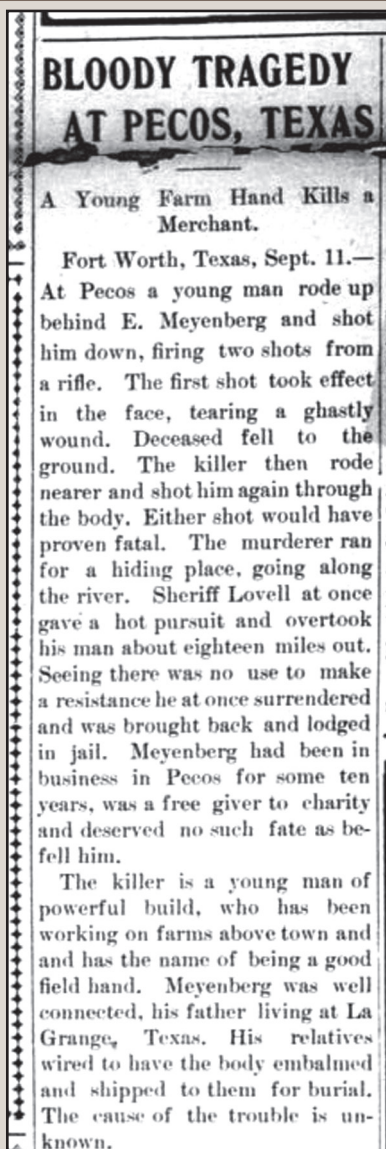


FIG. 6. Scanned photo of the original West Texas newspaper article reporting Meyenberg's death.

riverbank" (Galit and Simmons 2005). Another historian noted the term "a Pecos swap," which meant to steal (Wheeland 1892).

One newspaper article that we unearthed reports his death (Fig. 6). Unfortunately true to the "Old West" lawless stereotype, a young farmhand named Jim Pratt rode up behind Meyenberg and shot him down with a rifle on September 9, 1903 in, or near, Pecos, Texas (Nicholson 1903). A local law enforcement officer named Sheriff Lovell chased the killer and brought him into custody. Some three decades later, a number of Meyenberg's personal papers were gifted to herpetologist Albert Hazen Wright of Cornell University, having been incidentally purchased by Ellen Schulz Quillin, the curator and director of the Reptile Garden of the Witte Museum in San Antonio, many hundreds of miles from Pecos (Steinfeldt, undated). Among these was a copy of the 1901 description of *subocularis* that Brown had apparently personally sent to Meyenberg upon publication. Much to Wright's delight, attached to the back cover was a photograph of Meyenberg's live specimen of *L. alterna* taken by the zoo's photographer, R. D. Carson, under the direction of Brown at Philadelphia Zoo (Wright and Wright 1957). Above and below the print were handwritten compliments from either Brown or the zoo's photographer to Meyenberg. Even by this point in 1934, only this one specimen of *L. alterna* had ever been found, and though a photograph was included in the original 1901 description, this was the only other photograph of the animal known (Wright 1935).

The newspaper article reporting his death stated, "Meyenberg... was a free giver to charity and deserved no such fate as befell him" (Hamilton and Hamilton 1903). Until now, no one has endeavored to respond to the Wrights' question, "Who knows the life of Meyenberg, Brown's collector?" We hope that our report at least partially satisfies their inquiry, albeit somewhat belatedly.

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LITERATURE CITED

- ADLER, K. (ED.). 2007. Contributions to the History of Herpetology, Volume 2. SSAR, St. Louis, Missouri. 389 pp.
- BAILEY, V. 1905. Biological survey of Texas. *N. Amer. Fauna* 25:1–222.
- BROWN, A. E. 1901a. A new species of *Coluber* from western Texas. *Proc. Acad. Nat. Sci. Philadelphia* 53:492–495.
- . 1901b. A new species of *Ophibolus* from western Texas. *Proc. Acad. Nat. Sci. Philadelphia* 53:612–613.
- . 1902. *In* The Thirtieth Annual Report of the Board of Directors of the Zoological Society of Philadelphia. Philadelphia, April 24th, 1902.
- . 1903a. *In* The Thirty-First Annual Report of the Board of Directors of the Zoological Society of Philadelphia. Philadelphia, April 23rd, 1903.
- . 1903b. Texas Reptiles and Their Faunal Relations. *Proc. Acad. Nat. Sci. Philadelphia*, 55:543–558.
- . 1904. *In* The Thirty-Second Annual Report of the Board of Directors of the Zoological Society of Philadelphia. Philadelphia, April 28th, 1904.
- CONANT, R. 1957. Arthur Erwin Brown: "custodian of the garden" and naturalist of note. *America's First Zoo* 9(4):4–6.

- DITMARS, R. L. 1907. *The Reptile Book*. Doubleday, Page & Co., New York. 472 pp.
- GALIT, E. L., AND V. SIMMONS. 2005. *Exploring Texas History—Weekend Adventures*. Taylor Trade Publishing, Lanham, Maryland. 248 pp.
- HAMILTON, W. M., AND H. V. HAMILTON (Eds.). 1903. Bloody Tragedy at Pecos, Texas: A Young Farm Hand Kills a Merchant. *Palestine Daily Herald* (Palestine, Texas), Vol. 2, No. 59, Ed. 1, Saturday, September 12, 1903.
- HIATT, S. 2005. A beauty of a ratsnake. *Reptiles Magazine*, May, 13(5):28–37.
- HOEKSTRA, J. M., J. L. MOLNAR, M. JENNINGS, C. REVENGA, M. D. SPALDING, T. M. BOUCHER, J. C. ROBERTSON, AND T. J. HEIBEL, WITH K. ELLISON. 2010. *The Atlas of Global Conservation: Changes, Challenges, and Opportunities to Make a Difference*. University of California Press, Berkeley. 272 pp.
- KAUFFELD, C. F. 1969. *Snakes: the Keeper and the Kept*. Doubleday and Co., Garden City, New York.
- LOTTO, F. 1902. *Fayette County: Her History and Her People*. Sticker Steam Press, Schulenburg, Texas. 424 pp.
- MACLEOD, W. 2005. *Davis Mountains Vistas: A Geological Exploration of the Davis Mountains*. Texas Geological Press, Alpine, Texas. 192 pp.
- MERKER, G., AND W. MERKER. 2005. *Alternata: the Gray-Banded Kingsnake*. LM Digital, Benicia, California. 80 pp.
- NICHOLSON, E. J. 1903. News from the Southern States. (Texas: Pecos) Merchant Assassinated on Public Road by Farm Laborer. *The Daily Picayune* (New Orleans, LA), Friday, September 11, 1903.
- NORRIS, K. S., AND C. H. LOWE. 1964. An analysis of background color-matching in amphibians and reptiles. *Ecology* 45:565–580.
- PRICE, M. S. 2006. Bug-eyed beauties. *Reptiles Magazine*, May, 14(5):34–43.
- . 2009. *A Guide to the Rock Rattlesnakes of the United States*. ECO Herpetological Publishing, Rodeo, New Mexico. 160 pp.
- RHOADS, D. 2008. *The Complete Suboc: A Comprehensive Guide to the Natural History, Care, and Breeding of the Trans-Pecos Ratsnake*. ECO Herpetological Publishing and Distribution, Lansing, Michigan. 291 pp..
- RIDLEY, M. 2004. Crick and Darwin's shared publication in *Nature*. *Nature* 431:244.
- STEINFELDT, C. Undated. Quillin, Ellen Dorothy Schulz. *Handbook of Texas Online* (<http://www.tshaonline.org/handbook/online/articles/fqu09>), accessed 19 November 2011. Texas State Historical Association, Denton, Texas.
- TENNANT, A., J. E. WERLER, J. E. FORKS, G. T. SALMON, A. SANSOM, AND L. D. SINCLAIR. 1998. *A Field Guide to Texas Snakes*, 2nd ed. Gulf Publishing Co., Houston, Texas. 291 pp.
- WERLER, J. E., AND J. R. DIXON. 2000. *Texas Snakes: Identification, Distribution, and Natural History*. University of Texas Press, Austin, Texas. 437 pp.
- WHEELAND, W. S. 1892. Letter to the editor: A Buried Treasure: A Tragedy of the Pecos River, as Told by an Old Timer. *The Eddy* (New Mexico) *Argus*, 30 April 1892.
- WRIGHT, A. H. 1935. Some rare amphibians and reptiles of the United States. *Proc. Nat. Acad. Sci.* 21(6):340–345.
- , AND A. A. WRIGHT. 1957. *Handbook of Snakes of the United States and Canada*. Volume 1. Comstock Publishing Associates, Ithaca, New York. 564 pp.

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