

In reviewing my notes for this essay, I was struck how varied the quality of Gerstäcker's work is. Long stretches, especially in the later years, read like magazine fodder. He was a born story-teller; he wrote fluently and happily; only his relatively early death took the pen out of his hand. It is asking a lot to recommend reading this extensive oeuvre exhaustively. But it seems to me that it is too important as a body of writing about America to continue to be neglected. Who else among German writers, for example, has written fiction about Reconstruction?⁴⁵ The word should get around that there is more to it than regulators and river pirates.

⁴⁵On the attitudes of Germans in general, see Allison Clark Efford, "German Immigrants and the Arc of American Citizenship during Reconstruction, 1865-1867," *Bulletin of the German Historical Institute* 46 (Spring 2010): 61-76.

Friedrich Gerstäcker's Natural History Observations in Arkansas, 1838-1842

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FRIEDRICH GERSTÄCKER IS CELEBRATED elsewhere in this volume for his literary achievements, but he was first and foremost a hunter when he entered Arkansas for the first time in 1838, and he was immediately impressed with the amount of game that he encountered. By all accounts, Arkansas was a hunter's paradise at that time. This can possibly be attributed to the low number of inhabitants during colonial times due to epidemic diseases, which allowed game populations to flourish.¹ Gerstäcker's primary interest was hunting white-tailed deer (*Odocoileus virginianus*), specifically large bucks, and his diaries and later writings form one of the best portraits of an early deerslayer in America.² He also spent considerable time hunting wild turkeys (*Meleagris gallopavo*) and American black bears (*Ursus americanus*). His accounts of black bear hunts (and those of Fent Noland) are also the earliest and most detailed for this region of the United States.³ He only occasionally hunted other wildlife such as ducks

¹Friedrich Gerstäcker, *Wild Sports: Rambling and Hunting Trips through the United States of North America* (1844; anonymous trans. 1854; repr. Mechanicsburg, PA: Stackpole Books, 2004), 83; Morris S. Arnold, *The Rumble of a Distant Drum: The Quapaws and the Old World Newcomers, 1673-1804* (Fayetteville: University of Arkansas Press, 2000), 29-44; Keith Sutton, ed., *Arkansas Wildlife: A History* (Fayetteville: University of Arkansas Press, 1998), 3-16; Ralph A. Smith, "Exploration of the Arkansas River by Bénard de la Harpe, 1721-1722: Extracts from His Journal and Instructions," *Arkansas Historical Quarterly* 10 (Winter 1951): 346-363; Willard H. Rollings, "Living in a Graveyard: Native Americans in Colonial Arkansas," in *Cultural Encounters in the Early South: Indians and Europeans in Arkansas*, ed. Jeannie M. Wayne (Fayetteville: University of Arkansas Press, 1995), 38-60.

²Robert Wegner, "Friedrich 'Miller' Gerstaecker: A Legendary Ozark Deerslayer," *Deer and Deer Hunting* 24 (March 2001): 54-59.

³Kimberly G. Smith, Joseph D. Clark, and Philip S. Gipson, "History of Black Bears in Arkansas: Over Exploitation, Near Elimination, and Successful Reintroduction," *Proceedings: Tenth East-*

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and panthers. He recorded many observations on the flora and fauna that he encountered in Arkansas, and, taken as a whole, they provide the best description of the environment of the new state.⁴

Gerstacker actually traveled through only a limited portion of Arkansas between 1838 and 1842, mostly the central delta north of the Arkansas River to the southern part of Crowley's Ridge and Batesville, and westward in the Arkansas River Valley to the area around the Fourche La Fave River, from which he made one trip to the Ozarks.⁵ He first entered Arkansas on January 22, 1838, along the Southwest Trail at the Current River, in present-day Clay County, and left extreme southwest Arkansas into Texas on March 15, 1838, having spent most of the time in the Arkansas River Valley. He returned on May 18, 1839, from Memphis and left from Memphis on February 9, 1840, having spent most of his time in the vicinity of Bayou de View and the Cache River. He made a short two-week hunting trip in eastern Arkansas in mid-August 1840 and returned in early 1841 to establish a settlement on the Fourche La Fave in Perry County in central Arkansas. On December 19, 1841, he departed for the Ozarks, arriving near Combs, Madison County, on December 24, 1841. He hunted that area until February 14, 1842, arrived back at the settlement on February 27, was in Little Rock in March, back at the Fourche La Fave settlement in April, then back to Little Rock, where he attended a Fourth of July barbecue.⁶ The following day, he left Little Rock by boat for New Orleans. During those visits to Arkansas, he had the good fortune of relatively mild winters and summers.⁷ The period 1838-1842 saw a major drought in the eastern United States, and it did not rain or snow very often

ern Workshop on Black Bear Research and Management, 1990, ed. Joseph D. Clark and Kimberly G. Smith (Fayetteville: University of Arkansas Press, 1991), 5-13; Matthew M. Stith, "Women Locked the Doors, Children Screamed, and Men Trembled in Their Boots': Black Bears and People in Arkansas," *Arkansas Historical Quarterly* 66 (Spring 2007): 1-17; Ted R. Worley, "An Early Arkansas Sportsman: C. F. M. Noland," *Arkansas Historical Quarterly* 11 (Spring 1952): 25-39.

⁴In compiling these observations, we relied on four sources: Friedrich Gerstacker, *Tagebuch einer Amerikareise 1837-1843*, ed. Thomas Ostwald and Wolfgang Hochbruck (Braunschweig: Friedrich-Gerstacker-Gesellschaft, 2005) [Gerstacker's original diaries, translated for this article by Michael Lehmann]; Gerstacker, *Wild Sports*; Friedrich Gerstacker, *In the Arkansas Backwoods: Tales and Sketches*, ed. and trans. James William Miller (Columbia: University of Missouri Press, 1991); Friedrich Gerstacker, *Western Lands and Western Waters* (London: S. O. Beeton, 1864).

⁵See the chronology of his travels and maps compiled by Miller in Gerstacker, *In the Arkansas Backwoods*, xiii-xviii. Given the lack of infrastructure, most early travelers used or kept close to larger rivers such as the Ouachita, Arkansas, White, and Mississippi.

⁶Friedrich Gerstacker, "An Arkansas Barbecue, 1843 [sic]," trans. Ralph Walker, *Early American Life* 15 (August 1984): 30-31, 75.

⁷Based on temperature and precipitation recorded at Fort Gibson in eastern Oklahoma from 1838 to 1840; Dorian J. Burnette, David W. Stahle, and Cary J. Mock, "Daily-Mean Temperature Reconstructed for Kansas from Early Instrumental and Modern Observation," *Journal of Climate* 23 (March 2010): 1308-1333; and recent weather data from Muskogee, Oklahoma, in Anthony Arguez, Imke Durre, Scott Applequist, Russell S. Vose, Michael F. Squires, Xungang Yin, Richard R. Heim

during his visits. (The year 1840 was relatively wet in eastern Oklahoma and, presumably, Arkansas compared to today, but Gerstacker was not in Arkansas for most of 1840.)⁸

In the thirty years preceding Gerstacker's first visit, several important travelers visited what would become the state of Arkansas, most notably the explorers William Dunbar and George Hunter, the naturalist Thomas Nuttall, the geologist Henry Schoolcraft, the ornithologist John James Audubon, the surveyor George W. Featherstonhaugh, the writer Washington Irving, and Charles Latrobe, all of whom made some observations on natural history. However, most visited only one region of Arkansas and spent far less time within the state than Gerstacker did. Nonetheless, their observations provide a backdrop to those of Gerstacker in terms of what they saw, what he reported, and what he did not report.

Gerstacker provided the first detailed descriptions of old-growth bottomland forests in eastern Arkansas, a mosaic of very large trees, forest openings, and nearly impenetrable thickets, which have mostly disappeared due to harvesting and agriculture.⁹ Dominant tree species were oaks (*Quercus* species), particularly overcup oak (*Q. lyrata*), hickories (*Carya* species), tupelo (*Nyssa aquatica*), red mulberry (*Morus rubra*), persimmon (*Diospyros virginiana*), pawpaw (*Asimina triloba*), and bald cypress (*Taxodium distichum*). Thickets were composed of sassafras (*Sassafras albidum*) bushes, greenbrier (*Smilax* species), and poison ivy (*Toxicodendron radicans*) vines.¹⁰ Canebrakes (pure stands of *Arundinaria gigantea*, the only native species of bamboo) were also much more common and extensive then than they are today.¹¹ In describing an eastern Arkansas swamp, he mentioned that they were not like swamps in Germany:

Jr., and Timothy W. Owen, "NOAA's 1981-2010 U. S. Climate Normals: An Overview," *Bulletin of the American Meteorological Society* 93 (November 2012): 1687-1697.

⁸E. R. Cook and P. J. Krusic, *The North American Drought Atlas* (Lamont-Doherty Earth Observatory and the National Science Foundation, 2004), irdl.ldeo.columbia.edu/SOURCES/LDEO/TRL/NADA2004/pdsi-atlas.html (accessed March 25, 2014); Arguez et al., "1981-2010 U.S. Climate Normals."

⁹For description of old-growth forests in the southern United States, see James G. Dickson, "Birds and Mammals of Pre-colonial Southern Old-Growth Forest," *Natural Areas Journal* 11 (January 1991): 26-33. George W. Featherstonhaugh, *Excursion through the Slave States* (New York: Harper and Brothers, 1844), 101, presented a similar description of bottomland hardwood forests associated with the Arkansas River near Little Rock.

¹⁰See, e.g., Gerstacker, *In the Arkansas Backwoods*, 82, 144.

¹¹Gerstacker, *Wild Sports*, 168. Canebrakes were a dominant feature of the frontier landscape but disappeared due to overgrazing, altered burning regimes, and clearing of the land following settlement; Steven G. Platt and Christopher G. Brantley, "Canebrakes: An Ecological and Historical Perspective," *Castanea* 62 (February 1997): 8-21.

It isn't soft, marshy ground, but rather nothing more than a very low-lying area that is quite susceptible to flooding, but that dries out quite quickly as soon as the flooding recedes. Drier, higher strips of land intercross the swamp, and even when the flooding is at its peak they provide protection for the fairly numerous game that lives there. The swamp is covered by the most wonderful, luxuriant primeval forest one could imagine in all the earth. Oaks of all kinds, from the short overcup to the mighty white and red oaks that reach hundreds of feet in the air, abound there, as do sassafras trees four and five feet in diameter. . . . The undergrowth is made up of shorter sassafras and spicebush, as well as wild dogwood that turns the almost endless forest into a garden in the spring when it puts out its delightful white flowers.¹²

His frequent reference to sassafras thickets would suggest that that habitat was much more common then than it is today. He also mentioned isolated pines, which were quite unusual along the Cache River.¹³

Gerstäcker's characterization of the Ozark hardwood upland forests that lacked pines was consistent with that of others: mountains covered primarily with white oak but also hickories, black walnut (*Juglans nigra*), wild cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*), beech (*Fagus grandifolia*), and sugar maple (*Acer saccharum*).¹⁴ He again was impressed by the flowering of dogwoods in spring: "small bush-like trees, seldom more than seven inches in diameter, with a white blossom of the size of a rose; but the whole tree is covered with them. They grow in immense numbers, and give the forest the appearance of a garden."¹⁵

Gerstäcker correctly observed that, in general, if the canopy was opened and the ground was cleared, then left unattended, the land quickly reverted to a tangle of brush and vines that was virtually impossible to clear a second time.¹⁶ While living near the Ouachita Mountains in 1841, he commented on the importance of "hurricanes" that were frequent in Arkansas, causing damage to the forest a mile in width and several miles in length. "Hurricane" was a term then used to describe tornados, and he

¹²Gerstäcker, *In the Arkansas Backwoods*, 143-144. The height of the trees was surely exaggerated.

¹³Ibid., 82. An anomalous disjunct population of loblolly pines (*Pinus taeda*) still exists today in and around Monroe County; however, short-leaf pines (*Pinus echinata*) occur within the Cache River drainage on Crowley's Ridge (Tom Foti, personal communication, March 20, 2013).

¹⁴Gerstäcker, *Wild Sports*, 282. The Ozarks are still considered the largest contiguous oak-hickory forest without pine in the world; Victor Shelford, *The Ecology of North America* (Urbana: University of Illinois Press, 1963), 59.

¹⁵Gerstäcker, *Wild Sports*, 359.

¹⁶Gerstäcker, *In the Arkansas Backwoods*, 65.

was correct about their important ecological effects in the Ouachitas.¹⁷ After a time, affected areas became thickets of blackberries, thorns, and creepers that were quite impenetrable, offering secure refuge for bears and other wildlife.

Unlike other early travelers, Gerstäcker frequently lived off the land, so he was the first to comment on fruits and nuts that were available in the Arkansas forests. In May and June of 1839 in eastern Arkansas, he ate quantities of blackberries (*Rubus* species), but did not like the taste of the numerous pawpaw fruits: "This . . . is a small tree bearing a fruit about four or five inches long, and two to two and a half inches thick, having a soft sweetish pulp, with numbers of oily kernels. Generally speaking, the Americans do not value it much, though some are very fond of it. It was not at all to my taste."¹⁸ He identified three types of grapes: purple summer grapes that ripen in July, which resembled cultivated grapes, but were smaller and sour; winter grapes that ripen after frost, more like a currant; and muscadines (*Vitis rotundifolia*), which ripen in September and are eaten by many wildlife.¹⁹ At another time, he ate so many winter grapes that he could not eat his dinner. His appearance at a Fourth of July celebration was delayed by several hours due to his eating blueberries (*Vaccinium* species); and he once ate blueberries for two days. He also ate black hawberry (*Viburnum prunifolium*) berries and described them as sweet.²⁰

At times, Gerstäcker had little to eat and subsisted by sucking sassafras leaves and eating acorns. He ate acorns from overcup oaks, which he said bears were also fond of. Acorns from post oaks (*Quercus stellata*), he reported, were small and had a rather sweet taste.²¹ On several occasions, he mentioned large acorn crops and correctly observed that black bears seek alternative food sources like livestock during years when acorns were not abundant.²²

Gerstäcker mentioned a number of bird species in his diary and later writings, but he did not contribute any new species to the state list because Audubon had visited Arkansas in the early 1820s and reported a long list of common birds.²³ One of the first birds he encountered in 1838 was a

¹⁷Gerstäcker, *Wild Sports*, 273. Featherstonhaugh, *Excursion through the Slave States*, 108, also thought such damage was caused by hurricanes. For discussion of important effects of tornados in the Ouachitas, see Lewis M. Turner, "Catastrophes and Pure Stands of Southern Shortleaf Pine," *Ecology* 16 (April 1935): 213-215.

¹⁸Gerstäcker, *Wild Sports*, 134, 147, 157 [quotation].

¹⁹Ibid., 166.

²⁰Ibid., 220, 246, 250, 370-371; Gerstäcker, *Tagebuch*, 174.

²¹Gerstäcker, *Wild Sports*, 187, 247-248.

²²Gerstäcker, *In the Arkansas Backwoods*, 103, 204.

²³William H. Deaderick, "A History of Arkansas Ornithology," *American Midland Naturalist* 26 (July 1941): 207-217.

bald eagle (*Haliaeetus leucocephalus*), which he promptly shot.²⁴ However, other than turkeys, he mentioned shooting very few other species of birds. Given the abundance of deer, bears, and turkeys, early hunters rarely shot smaller game birds such as quail.²⁵ He did shoot three ducks during summer, which probably were wood ducks (*Aix sponsa*), and he mentioned shooting a duck with a green head, which probably was a male mallard (*Anas platyrhynchos*), but duck hunting was not a popular sport among early settlers.²⁶ Upon returning to Arkansas in May 1839, he mentioned shooting an American partridge ("Rebhuhn" referring to the grey partridge [*Perdix perdix*] of Europe) that was sitting in a tree. He and his companion, Uhl, were deer hunting on that day. They saw no deer, and "a poor partridge, perched on a tree, as is customary with the American partridges, and looking at us with inquiring eyes, was our only sport." This most likely refers to Northern bobwhites (*Colinus virginianus*), which were common in eastern Arkansas through the 1800s.²⁷

The most commonly mentioned birds are eastern whip-poor-wills (*Antrostomus vociferous*) and owls, probably great horned owls (*Bubo virginianus*). Owls called primarily during the night and whip-poor-wills in evening and just before dawn.²⁸ Gerstäcker makes no mention of chuck-will's-widow (*A. carolinensis*), a close relative of the whip-poor-will, so maybe he could not distinguish the two calls.²⁹ Unlike Latrobe and Featherstonhaugh, who had visited several years earlier, he did not mention large flocks of the now extinct passenger pigeon (*Ectopistes migratorius*), even during fall of 1841, which was a large flight year, at least around Little Rock.³⁰ Also, he only makes one reference to the extinct Carolina

²⁴Gerstäcker, *Wild Sports*, 85.

²⁵Rudolf Bennitt and W. O. Nagel, "A Survey of the Resident Game and Fur Bearers of Missouri," *University of Missouri Studies* 12 (no. 2, 1937): 1-125; Truett H. Holder, *A Survey of Arkansas Game* (Little Rock: Arkansas Game and Fish Commission, 1951), 34.

²⁶Gerstäcker, *Wild Sports*, 147, 257. He also mentioned shooting thirteen ducks at Porter's Creek in November 1841; Gerstäcker, *Tagebuch*, 195. Duck hunting in Arkansas did not become popular until around 1900; Holder, *Survey of Arkansas Game*, 121.

²⁷Gerstäcker, *Tagebuch*, 103; Gerstäcker, *Wild Sports*, 127; Bobwhites were once common throughout Arkansas but had declined by 1910; Arthur H. Howell, *Birds of Arkansas*, U.S. Department of Agriculture Biological Survey, bulletin no. 38 (Washington DC: Government Printing Office, 1911), 33-34. John James Audubon, *The Birds of America, From Drawings Made in the United States*, vol. 5, (Philadelphia: J. B. Chevalier, 1842), 59-66, noted that bobwhites were called partridges in the South and that they flew to shrubs and tree branches when disturbed. Noland also made reference to shooting and eating partridges in eastern Arkansas about the same time as Gerstäcker; Worley, "Early Arkansas Sportsman," 28.

²⁸Gerstäcker, *Wild Sports*, 358-359, 369; Gerstäcker, *In the Arkansas Backwoods*, 64, 163.

²⁹It is possible both species were called whip-poor-will; Margaret Morse Nice, *The Birds of Oklahoma*, Publications of the University of Oklahoma, vol. 3, no. 1, rev. ed. (Norman: University of Oklahoma Press, 1931), 107.

³⁰C. J. Latrobe, *The Rambler in North America*, (New York: Harper and Brothers, 1835), 1:201; Featherstonhaugh, *Excursion through the Slave States*, 88; Kimberly G. Smith and Joseph C. Neal,

parakeet (*Conuropsis carolinensis*), which should have been common and quite conspicuous, attacking ripe corn in fields in the company of woodpeckers.³¹ Two factors that have been suggested to have contributed to the demise of the Carolina parakeets are the arrival of the honey bee (*Apis mellifera*), introduced on the East Coast in the 1600s and quickly spreading westward, which would have competed with the birds for tree holes, and the cutting down of hollow bee trees, which also would have been nesting sites for parakeets.³²

Two other birds are mentioned: vultures and a large crow. Gerstäcker's observations on the diet of vultures are certainly some of the earliest from the South and suggest that they were subsisting primarily on deer carcasses, which they were capable of stripping in one day.³³ A "large crow" is mentioned as scavenging with the vultures. This reference is very interesting as it would be the first one to common ravens (*Corvus corax*) in Arkansas. Historically, ravens were associated with bison and wolves in neighboring Oklahoma, Kansas, and Missouri, disappearing as the other two species declined, but the occurrence of ravens in Arkansas has been a matter of dispute.³⁴

No other birds are mentioned in his diary, although he did make reference to birds singing sweetly in March 1838, when he was in Texas. In later writings, he did mention birds by name, including blue jays (*Cyanocitta cristata*) and mockingbirds, so he may have learned the names of some common birds after his trip.³⁵ He apparently had a collection of bird and snake specimens (*Präparate*) from Louisiana that he intended to take back to Germany, but he sold them to a museum in Cincinnati.³⁶

"Pre-Settlement Birds and Mammals of the Interior Highlands," in *Restoration of Old Growth Forests in the Interior Highlands of Arkansas and Oklahoma*, ed. D. Henderson and Larry D. Hedrick (Hot Springs, AR: Ouachita National Forest, 1991), 88.

³¹Occurrence of parakeets in Arkansas is reviewed in Daniel McKinley and Douglas A. James, "A Summary Account of the Carolina Parakeet in Arkansas," *Arkansas Academy of Sciences Proceedings* 38 (1984): 64-67, although they did not mention Gerstäcker's reference. Parakeets were common pests in cornfields; Daniel McKinley, "History of the Carolina Parakeet in its Southwestern Range," *Wilson Bulletin* 76 (March 1964): 68-93. The woodpeckers associated with cornfields were probably red-headed woodpeckers; Kimberly G. Smith, Paul G. Rodewald, and Jay Withgott, "Red-headed Woodpecker (*Melanerpes erythrocephalus*)" in *The Birds of North America*, no. 518, ed. Alan Poole and Frank Gill (Philadelphia: Birds of North America, Inc., 2000), 8-9.

³²For speculation about the demise of parakeets, see Daniel McKinley, "The Carolina Parakeet in Pioneer Missouri," *Wilson Bulletin* 72 (September 1960): 274-287.

³³Gerstäcker, *Wild Sports*, 251, 253, 302.

³⁴*Ibid.*, 302. For discussion of historical distributions of ravens, see Nice, *Birds of Oklahoma*, 127-128. Howell, *Birds of Arkansas*, 56, reported two records of ravens in Arkansas in 1884 and 1890, but Douglas A. James and Joseph C. Neal, *Arkansas Birds* (Fayetteville: University of Arkansas Press, 1986) does not mention that ravens ever occurred in Arkansas.

³⁵Gerstäcker, *Wild Sports*, 110; Gerstäcker, *Western Lands*, 239, 332.

³⁶Gerstäcker, *Tagebuch*, 154.

Gerstäcker mentioned little about deer behavior, but there are several accounts of bear behavior and ecology. For example, he recalled a conversation while visiting Madison County in the Ozarks where his host, "Conwell," gave a fairly accurate lengthy account of "sleeping" behaviors of bears: males den in December but come out during mild weather; bears sleep in a ball (to conserve heat); bears are able to raise their heads if disturbed (they are not true hibernators but are more like in torpor). In the ensuing hunt of a bear in a cave with the Conwell family, Gerstäcker described a cornered bear that "laid back her ears, snapped her teeth, and kept constantly swinging to and fro; as she did not sit quite upright." Snapping teeth (called "jaw popping") is a common behavior of an aroused bear.³⁷

Besides bears and deer, Gerstäcker continually mentioned wolves and panthers, whose abundance would have been tied to the abundance of deer, their main prey item.³⁸ Two species of wolves were found in Arkansas, gray (*Canis lupus*) and red (*C. rufus*), and the panther was the Florida panther (*Puma concolor coryi*). Bears, wolves, and panthers were usually described as nocturnal, meaning that they were already being affected by human persecution, since, if unmolested, these species are usually diurnal.³⁹ In several stories, Gerstäcker mentioned the decline in game species in Arkansas.⁴⁰

Gerstäcker is credited in *Arkansas Mammals* with being the last person to see American bison (*Bison bison*) in Arkansas during his short hunting trip to Bayou DeView and the Cache River in August 1840, when he killed a cow with a calf from a herd of sixteen animals, but bison may have persisted a few more years in the St. Francis River drainage. Gerstäcker had hoped to capture the calf alive, but it escaped. He did not like the meat of the cow, stating, "Well-tanned sole-leather would have been a delicacy in comparison; the marrow was the only part good for anything."⁴¹

Schoolcraft had reported seeing elk in 1818-1819 in Arkansas, but hides were becoming scarce in the fur trade even at that time. The fact that

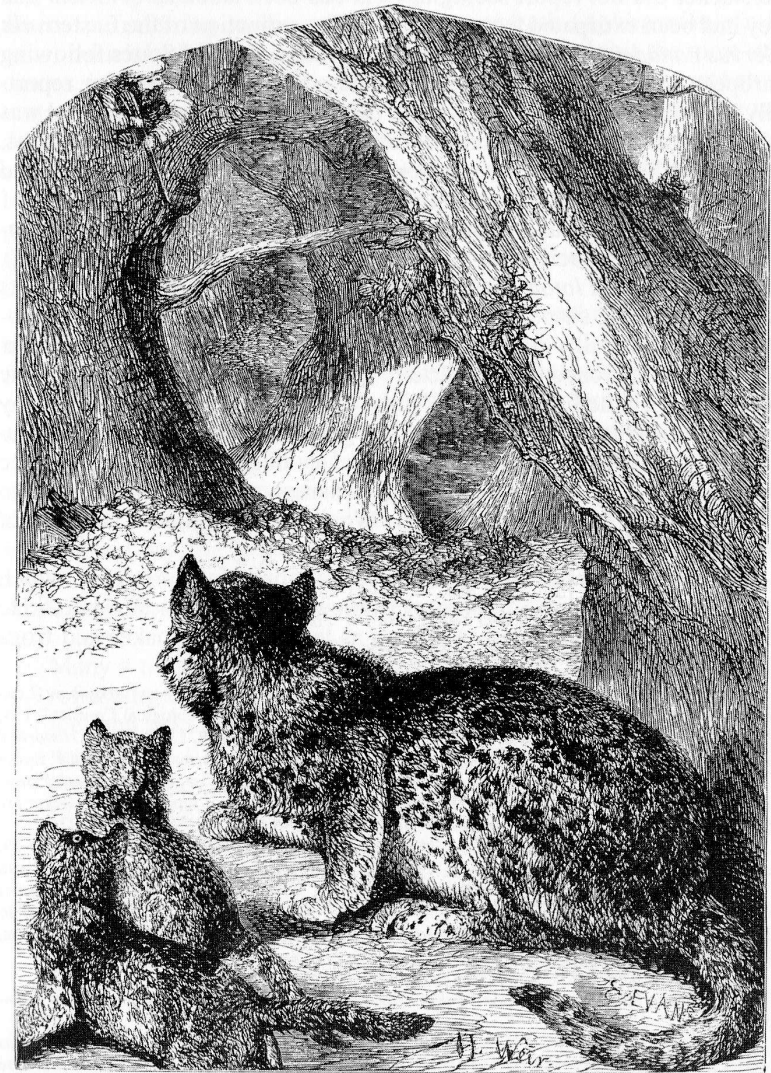
³⁷Gerstäcker, *Wild Sports*, 312-313, 318-319.

³⁸Old-growth southern forests were prime habitat for deer and therefore panthers; Dickson, "Birds and Mammals," 30-31.

³⁹Gerstäcker, *Wild Sports*, 99, Gerstäcker, *In the Arkansas Backwoods*, 50, 142.

⁴⁰Gerstäcker, *In the Arkansas Backwoods*, 101, 122. Huge quantities of furs had been shipped out of eastern Oklahoma, Arkansas, and Missouri prior to Gerstäcker's arrival; Smith and Neal, "Presettlement Birds and Mammals," 90; Joseph Patrick Key, "Indians and Ecological Conflict in Territorial Arkansas," *Arkansas Historical Quarterly* 59 (Summer 2000): 129-135.

⁴¹Gerstäcker, *Wild Sports*, 174, 185, 190, 208-209 [quotation]. John A. Sealander and Gary A. Heidt, *Arkansas Mammals: Their Natural History, Classification, and Distribution*, rev. ed. (Fayetteville: University of Arkansas Press, 1990), 24, thought his was the last report, but see Key, "Indians and Ecological Conflict," 135.



THE PANTHER AT FAULT.

From *Wild Sports in the Far West* (1854).

Gerstäcker did not report seeing any elk has been taken as evidence that they had been extirpated from the state.⁴² The extinction of the Eastern elk (*Cervus canadensis canadensis*) from the eastern United States following European settlement and rapid demise and extirpation of the bison, reportedly very common in Arkansas in the 1700s, is well documented, and was due to overharvesting by both settlers and Native Americans for skins, fur, meat, tallow (in the case of bison), teeth (for jewelry), and antlers and horns; habitat destruction; and possibly disease.⁴³

Although hunted and trapped by Native Americans, most small mammals, such as squirrels (gray [*Sciurus carolinensis*] and fox [*S. niger*]), raccoons (*Procyon lotor*), opossums (*Didelphis virginiana*), and wild cats (probably skunks, striped [*Mephitis mephitis*] or spotted [*Spilogale putorius*]) were generally ignored as game by early settlers, and were, therefore, rarely mentioned by Gerstäcker.⁴⁴ He did pursue a fox and was quite surprised when the fox was treed by the dogs, as foxes native to Germany did not climb trees. This was probably a gray fox [*Urocyon cinereoargenteus*], which typically “tree” when chased by dogs.⁴⁵ Gerstäcker was the first person to report on cave visits in Arkansas and thus was the first to document large bat roosts in winter: “We disturbed immense numbers of bats with our torches.”⁴⁶

A few reptiles and amphibians were mentioned by Gerstäcker, which provided some of the first glimpses of their occurrence in the state.⁴⁷ He described swamps in eastern Arkansas as teeming with snakes and frogs

⁴²Henry Rowe Schoolcraft, *Journal of a Tour into the Interior of Missouri and Arkansas* (London: Sir Richard Phillips and Co., 1821), 26, 58, 60; Key, “Indians and Ecological Conflict,” 134; Wayne Morris, “Traders and Factories on the Arkansas Frontier, 1805-1822,” *Arkansas Historical Quarterly* 28 (Spring 1969): 45. Elk also quickly disappeared at that time in eastern Oklahoma; James H. Shaw and Martin Lee, “Relative Abundance of Bison, Elk, and Pronghorn on the Southern Plains, 1806-1857,” *Plains Anthropologist* 42 (February 1997): 163-172. Lack of reports by Gerstäcker are taken as evidence of extirpation in Arkansas by Sealander and Heidt, *Arkansas Mammals*, 22.

⁴³Bison were widespread and common within the state before 1800; Arnold, *Rumble*, 30-39; Smith, “Exploration of the Arkansas River,” 346-363. They disappeared quickly after that; William T. Hornaday, “The Extermination of the American Bison,” Smithsonian Institution, United States National Museum, *Report of the National Museum* (1886-1887): 369-548; Sam Dickinson, “Buffalo in Arkansas,” *Old Time Chronicle* (June 1995): 26-28; Shaw and Lee, “Relative Abundance of Bison, Elk, and Pronghorn,” 163-172.

⁴⁴Gerstäcker, *Wild Sports*, 91-92; Holder, *Arkansas Game*, 44.

⁴⁵Gerstäcker, *Wild Sports*, 146; Gerstäcker, *Tagebuch*, 113; Sealander and Heidt, *Arkansas Mammals*, 205.

⁴⁶Gerstäcker, *Wild Sports*, 315; Gerstäcker, *Western Lands*, 221; Sealander and Heidt, *Arkansas Mammals*, 22. Gerstäcker’s observations predate what were previously thought to be the earliest cave reports in Arkansas; G. O. Graening, Dante B. Fenolio, and Michael E. Slay, *Cave Life of Oklahoma and Arkansas* (Norman: University of Oklahoma Press, 2012), 13.

⁴⁷The first systematic reports began in the 1850s; Stanley Trauth, Henry W. Robison, and Michael V. Plummer, *The Amphibians and Reptiles of Arkansas* (Fayetteville: University of Arkansas Press, 2004), 1.

and other reptiles. On one occasion, he related an encounter with a water moccasin, referring to the poisonous cottonmouth (*Agkistrodon piscivorus*), which he killed with a long stick. He considered this the most venomous species after the rattlesnake, which is apparently true. In one story, a man stepped on a rattlesnake in the middle of the night, and he was dead by morning.⁴⁸ Importantly, Gerstäcker saw and shot many American alligators (*Alligator mississippiensis*) in eastern Texas in spring of 1838, but did not mention any in eastern Arkansas, suggesting that they were not present north of the Arkansas River at that time.⁴⁹ Gerstäcker mentioned that several dozen turtles were being served at the Fourth of July barbeque in Little Rock.⁵⁰

Gerstäcker also made several references to arthropods. At certain times of the year, mosquitoes and flies (probably black flies of the family *Simuliidae*) must have been terrible in eastern Arkansas. He reported that one night: “We walked on for about five miles in the brightest moonlight, and then lay down to repose, but were obliged to get up again and make a fire, on account of the mosquitoes, which were very troublesome.” The next day, he and his companion went deer hunting, but a farmer told them they would not find any because “they all seek shelter in the thickest coppices, or among the reeds to avoid the flies and mosquitoes, which persecute the poor creatures incessantly.” Likewise, adult ticks were thick in April in central Arkansas, and young ticks were abundant during summer.

Many a night I lay in the mild warm air of the forest. Sweet and refreshing as was the face of nature, all was not repose; mosquitoes and ticks almost drove me to despair. When the fire was once well alight, the mosquitoes were attracted by it, and destroyed themselves by the thousands, but the tick became the more furious. They swarm in the woods about the end of April, and are a dreadful torment to the newcomer. The full-grown ticks, about the size of a small shot, are not the worst, because when they bite they may be caught and killed; but in July, the seed-ticks, smaller than poppy seeds, cover the bushes by millions, and I have often

⁴⁸Gerstäcker, *Wild Sports*, 130, 134, 147; Gerstäcker, *In the Arkansas Backwoods*, 42, 57-58; Gerstäcker, *Tagebuch*, 114; Gerstäcker, *Western Lands*, 221. Cottonmouths bites are rarely fatal, whereas rattlesnake bites have higher morbidity (Steven J. Beaupre, personal communication, March 29, 2013).

⁴⁹Gerstäcker, *Wild Sports*, 114. Eastern Arkansas would have been the extreme edge of the northern range of alligators; Trauth, Robison, and Plummer, *Amphibians and Reptiles*, 202.

⁵⁰Gerstäcker, “Arkansas Barbecue,” 31.

almost lost myself under them. Tobacco smoke is the only safeguard against them, as it kills them at once.⁵¹

Gerstäcker claimed that Arkansans did not know that crayfish (*Krebse*), used primarily for fish bait, were edible. He and Uhl had stopped at a house to wait out the mid-day heat, when:

I observed one of the boys fishing in a little flowing stream, pulling up prizes as fast as he could. The lucky fisherman excited my curiosity; I went to see what he was catching, and could hardly believe my eyes when I found that they were crawfish. So long was it since I had tasted them, that they made my mouth water; I soon got my fish-hook to work, and in the course of half an hour Uhl and I with two of the boys had caught half a pailful. The old lady looked at us with astonishment as we seized a saucepan, put in the crawfish with a little salt, filled it up with water, and set it on the fire; they has always thought them only fit for bait. The crawfish soon began to show their red noses, and, when done, we set to work on them. The meal itself was no slight treat, but our enjoyment was much heightened by watching the countenances of the Americans, expressive half of merriment, half of disgust, for they had never dreamt that people could eat such nasty animals with such a zest.⁵²

In another story, he mentioned a person reacting like he had been bitten by a tarantula. There is a native tarantula in Arkansas, and the females are quite aggressive and capable of a nasty bite if disturbed in their burrows.⁵³ Like his descriptions of bat roosts, his observations of cave crickets and “blue-bottle flies” in a cave in Madison County are the first recorded occurrences of any cave life in Arkansas.⁵⁴

Gerstäcker also documented the interaction of humans and bees in Arkansas. He described how to find a bee tree, using honey as bait:

⁵¹Gerstäcker, *Wild Sports*, 126-127, 218; Gerstäcker, *Tagebuch*, 266.

⁵²Gerstäcker, *Wild Sports*, 128-129 [quotation]; Gerstäcker, *Tagebuch*, 104.

⁵³Gerstäcker, *In the Arkansas Backwoods*, 132. The native tarantula, *Aphonopelma hentzi*, was the subject of a book by William J. Baerg, *The Tarantula* (Lawrence: University of Kansas Press, 1958).

⁵⁴Gerstäcker, *Wild Sports*, 315; Gerstäcker, *Tagebuch*, 232. The cave is located 2.5 miles east of Witter on Madison County Road 3370 across Keck's Creek; Clarence Evans, “Gerstaecker and the Konwells of the White River Valley,” *Arkansas Historical Quarterly* 10 (Spring 1951): 1-36. Today it is known as Wax Pharris Cave on old Fred Keck's farm; Anonymous, “Bear Hunt near Witter,” in *History of Witter, Arkansas 1830-2003*, comp. Joy A. Russell (Huntsville, AR: Madison County Genealogical and Historical Society, 2003), 64.

The bees soon discover it, and when they have got as much of the honey as they can carry, they rise in circles, which become larger and larger, till they attain a certain height; then they dash off direct for their own tree, to deposit their store in the general warehouse. The bee-hunter must take particular notice of the line of their flight, which requires a good eye, and then carry his bait some two hundred yards further in that direction, when the bees will soon flock round it again. If, when loaded, they keep the same course, it is a sign that the tree is still in that direction, and the bait must be carried further, until they fly the other way. Then the bee-hunter will know that he has passed the tree, and that it must be between his present and his last station, and he is not long in finding it. When he comes near the tree, and the bees are at work, their unsteady zigzag flight will betray its proximity.

Honey bees orient primarily by the sun, so what Gerstäcker described is the circling to get oriented, then the bee making a straight-line flight (a “bee-line”) back to its hive. Once established, the bee makes straight-line flights back to the food source and then back to the hive, recruiting other members of the hive to follow it. Apparently people in Arkansas were on an honor system when discovering a bee tree:

It is a backwoods custom, when any one finds a tree with wild bees, and has not time or inclination to cut it down at once, to cut his name, or if he cannot write, as was the case with S. [Gerstäcker's companion], to make his mark on it, and if anyone else finds the tree and sees the mark, he goes on his way, leaving it to the first finder.

Gerstäcker's frequent references to the cutting down of bee trees for honey adds important evidence that the extent of this practice may have been underestimated—as has its detrimental impact on parakeet populations, as mentioned above.⁵⁵

Gerstäcker returned to Arkansas after the Civil War in 1867 on his way to South America. While appalled by the destruction that he found, he made no new natural history observations on that trip.⁵⁶

⁵⁵Gerstäcker, *Wild Sports*, 139 [second quotation], 247 [first quotation], 248, 364. A recent review and technical treatment of orientation in honey bees is Katelyn M. Dovey, Jordan R. Kemfort and William F. Towne, “The Depth of the Honeybee's Backup Sun-Compass Systems,” *Journal of Experimental Biology* 216 (June 2013): 2129-2139.

⁵⁶Anita Bukey and Evan Burr Bukey, “Arkansas after the War: From the Journal of Frederick Gerstaecker,” *Arkansas Historical Quarterly* 32 (Autumn 1973): 255-273.

The breadth of Gerstäcker's natural history observations during his antebellum sojourns have generally been neglected when the history of the flora and fauna of Arkansas has been discussed, possibly because his works were originally published in German and some have only relatively recently been available in English. He obviously was a keen observer but would have been hampered in species identification of all but the most common plants and animals. He had no formal training in biology and would have had to rely on names given to him by local people. But few early travelers in Arkansas mentioned anything at all about small birds, mammals, or the vegetation, making his contribution unique.⁵⁷ With any luck, the importance of these observations will come to be recognized.

⁵⁷Kimberly G. Smith and Daniel Petit, "Breeding Bird Populations and Forestry Practices in the Ozarks: Past, Present, and Future Relationships," *Bird Conservation* 3 (1988): 22-48; Smith and Neal, "Pre-Settlement Birds and Mammals," 91. For example, Nuttall mentioned only a handful of bird species while traveling in Arkansas; Deaderick, "History of Arkansas Ornithology," 208.

The Gentlemen and the Deerslayer: Contrasting Portraits of Pioneer Arkansas

ROBERT COCHRAN

THE UNIQUELY POSITIVE TONE of Friedrich Gerstäcker's portrait of Arkansas life is highlighted when his account is compared with other early travelers' reports. The earliest considered here were produced by two Scotsmen, William Dunbar and George Hunter, who in 1804-1805 ascended the Ouachita River through Louisiana and south Arkansas as far as present-day Hot Springs. Each man kept a journal. Almost fifteen years later, in the winter of 1818, New Yorker Henry Rowe Schoolcraft and a traveling companion named Levi Pettibone explored the White River country of north central Arkansas in search of lead deposits, at almost the same time as English botanist Thomas Nuttall traveled up the Arkansas River from Arkansas Post to Fort Smith. Another fifteen years passed before geologist George William Featherstonhaugh, another Englishman, crossed the state from northeast to southwest in 1834. Gerstäcker was the last of this crew. First arriving in January 1838, he didn't leave for good until July 1842.

This adds up to six journal-keeping travelers, who traversed every quadrant of Arkansas over a nearly forty-year span of territorial and early statehood times. Read as a group, they divide sharply into two camps, with Gerstäcker constituting an outlier party of one and the others so wholly in agreement their accounts could in many places be freely substituted one for another. A closer look at their contrasting portraits reveals Gerstäcker's attitudes and perspectives more clearly.

From the earliest accounts, the majority party, gentleman scientists all, was conspicuously unimpressed by the pioneer settlers they encountered. Hunter's journal entry for November 6, 1804, chastises the "old settlers, chiefly Canadian French," of the Ouachita River country for the "want of forethought & industry" that "leaves them in want of almost every com-

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