

Withers, Bexar (Macdona)	Yampareka, Hardeman	Zana, San Augustine
Wolfs Crossing, Burnet	Yanceyville, Stephens	Zapp, Fayette
Wolfe, Hunt	Yandell, Tom Green	(Fayetteville)
(= Wolfe City)	Yarbroville, Limestone	Zedlars Mills, Gonzales
Wonders, Nacogdoches	Yegua, Burleson	Zeevee, Hill
Woodstock, Bowie	Yeldell, Freestone	(not Ceevee, Cottle)
Woody, Coleman	Yellow Prairie, Burleson	Zelda, Leon
Wooster, Harris	Yerby, Freestone	Zelo, Jones
Wootan Wells,	Yero, Walker	Zizzag, Medina (Devine)
Robertson (Hammond)	Yesner, Hopkins	Zimbi, Harris
(also Wootan)	(Sulphur Springs)	Zint, Gonzales
Word, Shelby (Center)	Yew, Fannin	(sp. ?Zink)
Wright, Swisher	(Honey Grove)	Zouretle, Comanche
Wyatt, Ellis (Venus)	Yewpon, Bastrop	Zulrich, Madison
Wyleville, Erath	York Creek, Guadalupe	(= Zulch)
Wylma, Shelby	Yowell, Hunt-Delta	Zulu, Hansford (Spearman)
Wynema, Foard	Yuno, Angelina	

Jacob Boll's Collecting in the Texas Permian: A Note and a Correction

S. W. Geiser

Dr. A. S. Romer in a recent note¹ has written on collecting vertebrate fossils in the Texas "Red Beds." In his paper, Romer states that the year 1946 is the seventy-fifth anniversary of the beginning of vertebrate-fossil collecting in the Permian of north-central Texas; and bases his statement on a small Permian reptile bone (which turned up in the Museum of Comparative Zoology a few years ago) with a label in Jacob Boll's handwriting, "Beaver Creek, 50 miles north of Fort Belknap, Texas, 1871."

I have been much interested in Romer's note because of my own extensive studies on Boll's life and explorations in Texas. Boll certainly did collect in the Texas Red Beds before E. D. Cope first visited Dallas in the summer of 1877 at the conclusion of the Nashville Meeting of the A.A.A.S. (not during the winter of 1877, as Romer states). I suspect at the outset that the "1871" of the label Romer saw is really an "1877," in which Boll failed to cross-strike the second seven (which in Germanic writing is singularly like the figure "1," and hence is usually differentiated by a cross-stroke through the stem of the "7"). Boll was often absent-minded and forgetful of details, though very accurate in matters that seemed to him important.

But there is no justification in disposing of Romer's contention on such *a priori* grounds; I have, therefore, checked over

¹A. S. Romer, "Texas Red Beds collecting." (*News Bulletin of the Society of Vertebrate Paleontology*, No. 16, Dec. 31, 1945, pp. 25-27.)

Boll's activities during the years 1869 to 1877 (when he made his first collecting trip to Archer County for Professor Cope).

Boll left his home in Switzerland for America in late summer of 1869, visited Professor Louis Agassiz at Harvard, and then came on to Dallas, Texas. He made great collections of *naturalia* (principally at Dallas and Galveston) in the fall and winter months of 1869-70. Heinrich Frey² states that Boll returned to Switzerland about March, 1871, and the M.C.Z. *Report* for 1870 implies that he had then been collecting for about a year in Texas. He did, indeed, leave America for Switzerland in March, 1871³. He returned to America "in the late summer of 1871," to go back to Agassiz at Cambridge⁴. He arrived in Cambridge at the end of October, 1871; but left again for Switzerland in March, 1872⁵. He collected many insects during the fall and winter months in the vicinity of Cambridge, and attended meetings of the Boston Society of Natural History from October 25, 1871, to February 28, 1872⁶.

It is possible, of course, that Boll may have collected in northwest Texas during January and February of 1871 before he made his first return to Switzerland; but most doubtful that he did any collecting in northwest Texas during the fall months of that year, after his return to America. The only possible time for such collecting under the circumstances was in January and February of 1871. But (in view of the Indian raids which constantly troubled northwest Texas in that period) it is more that doubtful that Boll would have dared to venture into what then was largely Indian country. The Salt Creek Massacre occurred in May, 1871, and it was not until after the battle of Adobe Walls (June, 1874) that the warlike Indians were decisively defeated. After the Indian campaigns of Miles, Price, Baldwin, Chaffee, Buell, and others, in more than twenty engagements, the Indians were finally subdued in the summer of 1875; and northwest Texas freed from the constantly-recurring Indian raids⁷.

²H. Frey, "Jacob Boll, ein schweizer'scher Naturforscher." (*Mitteilungen der schweiz. entomol. Gesellschaft*, Bd. 6, 1880-83 [1880], pp. 47-51.)

³*Opus cit.*, 1871, p. 23.

⁴H. Frey, *op. et l.c.*, 1880.

⁵*Ann. Rept. Mus. Comp. Zool. for 1872, 1873*, p. 24.

⁶*MS. Proceedings of the Boston Society of Natural History.*

⁷*Cf. R. N. Richardson, Texas, the Lone Star State*, 1943, pp. 303-05.

In the early part of 1872, Boll's wife, in Switzerland, became ill of an incurable disease, and later lost her reason. Boll remained in Switzerland during the years 1872-73 until after the death of his wife. He returned finally to America in January, 1874.

The *Annual Report* of the M.C.Z. for 1871 mentions Boll's work at the Museum, but does not state the duration of his tenure.⁸ From him, during 1871, the Museum acquired 1,260 specimens of Texas fossils, principally Cretaceous, as well as fifteen species of mammals from Dallas, several Texan Pleistocene mammals, several thousand insects from New England, and some Lepidoptera raised in Europe from cocoons collected in America.⁹ After Boll's final return to America, he collected for several years in all departments of natural history, before engaging as collector for Cope in 1877.

I have written elsewhere in detail of Boll's later life and work in Texas, which obviates the necessity for repetition here.¹⁰ Inquiry made in 1928 of members of Boll's family, then living, elicited the information that Boll made his first trip into the Wichita country in 1876, primarily to examine copper deposits there. It was then, and in the late winter of 1876-77 that he found and brought back to Dallas the specimens of *Eryops* and *Trimerorhachis* which Cope first saw in the summer of 1877 at Dallas.

From what we know of the Texas Indian situation, of Boll's activities, and the recollections of members of Boll's family, I must conclude that Boll's earliest collecting in the Permian country of Texas did not long antedate his meeting with Cope in 1877. I believe this is to be dated correctly, as "1876."

⁸*Ann. Rept. Mus. Comp. Zool. for 1871, 1872*, p. 27.

⁹*Ibid. for 1871, 1872*, pp. 13, 18, 24, 34.

¹⁰Cf. S. W. Geiser, as follows: *Southwest Review*, vol. 14, 1929, pp. 184-98; *Dallas Morning News*, Oct. 21, 1928, Sept. 30, 1930; *American Midland Naturalist*, vol. 11, 1929, pp. 435-52; *Der Schweizer*, Nov. 30, 1929; *Dictionary of American Biography*, s. v. "Boll"; *Naturalists of the Frontier*, 1937, pp. 22-37.