

Apply Salt, Gunpowder, and the Yellow of an Egg



Western rattlesnake, Crotalus viridis

The Treatment of Rattlesnake Bites by the Western Kansas Settler

by Eugene D. Fleharty

Pioneers met and overcame a variety of environmental obstacles while settling Kansas. Blizzards and extreme cold were common during winter; prairie fires, locust plagues, droughts, violent thunderstorms, and tornadoes were adversities that occurred periodically during the remainder of the year. However, one possible danger was present daily from late March through October or early November—the dreaded rattlesnake. Focusing on one decade, the 1870s, from the settlement period, this study examines the habits of rattlesnakes that brought them into contact with settlers, the attitude of settlers toward those reptiles, the number of bites that occurred during that decade, the number of people who died as a result of those bites, and particularly the efficacy of the different kinds of treatments provided to the victims.

Only two species of poisonous snakes are found in western Kansas. Both are rattlesnakes. The massasauga, *Sistrurus catenatus*, occurs in the eastern two-thirds of the state. It occupies a “wide range of habitats ranging from semi-arid sagebrush prairie and rocky, prairie hillsides to open wetlands.” The western rattlesnake, *Crotalus viridis*, occurs in rocky canyons and open prairies, principally in the western half of Kansas.¹ The western rattlesnake, rather than the massasauga, probably caused most of the snake-related difficulties for settlers.

Snakes are “cold-blooded” or ectothermic. Therefore, before the subfreezing temperatures of winter, snakes must seek refugia from the cold. In autumn, as temperatures decline rattlesnakes

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1. Joseph T. Collins, *Amphibians and Reptiles in Kansas* (Lawrence: University Press of Kansas, Natural History Series No. 13, 1993), 278, 275.

make their way to “dens” or hibernacula where they spend the winter sheltered in a semitorpid state. The temperatures within the den are low but not freezing. Hibernacula can be almost anywhere snakes can move below the frost line. In areas with large rocks, hibernacula frequently are in crevices that lead deep below the frost line. During settlement of western Kansas, when prairie dog towns were common, snakes frequently utilized the deep burrows of prairie dogs.²

Occasionally these hibernacula would contain large numbers of snakes, both poisonous and nonpoisonous. In a hibernaculum near Concordia three thousand snakes were reported to have been killed in October 1876. Fifteen hundred other snakes allegedly were killed at the same den in May 1878. Near Cawker City in September 1877 a farmer unearthed 330 snakes while plowing, and in the vicinity of Hays 168 rattlers and 300 other snakes were killed in a prairie dog town in November 1878. Admittedly these numbers probably suffered from some exaggeration, but it is well documented by herpetologists that dens can harbor large numbers of snakes.³

Kansas settlers had, like most people, “an innate fear of snakes or, more precisely, . . . an innate propensity to learn such fear quickly and easily past the age of five.”⁴ Therefore, to many settlers, the only good snake was a dead snake. In the

2. Laurence M. Klauber, *Rattlesnakes: Their Habits, Life Histories, and Influences on Mankind*, 2 vols. (Berkeley: University of California Press, 1956), 541–49.

3. *Ellis County Star* (Hays), October 26, 1876; *Pawnee County Herald* (Larned), May 14, 1878; *Hays City Sentinel*, September 21, 1877, November 16, 1878; Klauber, *Rattlesnakes*, 549–52.

4. Edward O. Wilson, *Biophilia* (Cambridge, Mass.: Harvard University Press, 1984), 84; Klauber, *Rattlesnakes*, 953–55.

autumn when snakes gathered at dens, or in early spring prior to dispersal, large numbers of snakes would “lay-out” or bask on warm days near the den-site. It was at these times, when numerous snakes were found in a relatively small area and therefore particularly vulnerable, that planned snake hunts

were undertaken in an attempt to eradicate the “evil” serpents. Hunters near Hutchinson in 1872 killed fifty-five rattlesnakes in prairie dog towns in October and November. In the same vicinity, in November 1873, more than 200 snakes were killed of which 175 were rattlesnakes. The success of these hunts in Reno County led the editor of the *Hutchinson News* to predict that “after next spring a snake will be a curiosity in the settled portions of Reno County.” A hunt in Barton County resulted in fifty-six rattle-

snakes killed at a prairie dog town in November 1876.⁵

When warm spring days arrive, rattlesnakes leave the denning areas and move to summer ranges at varying distances from the den. During the warmer periods of the year, after these spring dispersals, rattlesnakes seemed to early settlers to be everywhere. They were found in the open prairie, in croplands, gardens, and near outbuildings. They also entered dugouts and sod houses. Because rattlesnakes prefer temperatures between eighty and ninety degrees, settlers had to be particularly vigilant in the early morning and evening hours during spring and autumn and at night during the heat of the summer.⁶ With one strike, these snakes could inject enough poison to kill

5. *Hutchinson News*, October 17, 1872; *Ellsworth Reporter*, November 7, 1872; *Hutchinson News*, November 6, 1873; *Inland Tribune* (Great Bend), November 4, 1876.

6. Klauber, *Rattlesnakes*, 571–75; Collins, *Amphibians and Reptiles*, 275.

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a child in a matter of hours. Nor were adults immune from the poison: according to newspaper reports, the loss of a loved one among Kansas settlers was not unusual, and many grief stricken families were found on the prairies in the 1870s.

During this decade eighty-two separate incidents of rattlesnake bites were reported. All incidents occurred from March through October. This was not unexpected as ectotherms are not active during low temperatures. The majority of the bites (75.6 percent) occurred during June, July, August, and September (Table 1).

Most frequently bites occurred as settlers and their families conducted the daily activities required to maintain a homestead or small farm. One factor that influenced the number of bites was the penchant for farmers and their families to go barefoot. Activities during times when bites were received included walking or working in the garden (picking peas, pulling weeds), working the land (plowing, raking hay, picking up fodder, harvesting, binding wheat, picking wild fruit, pulling a picket pin), and recreation (fishing, retrieving a marble from beneath a bed, playing with the snake, chasing a ground squirrel, playing in a cropfield, at-

tempting to remove the rattles and skins from “dead” snakes).

Treatments were provided to all who were bitten. However, for a variety of reasons many of those bitten probably were in no danger of dying. Most kinds of larger snakes, poisonous or otherwise, will strike in their own defense when threatened. In some of the reported snakebite cases the individual bitten may not have seen the snake, or if he observed it may have misidentified it. In addition, even if the snake were poisonous, the bite might have been “dry,” with either no or insufficient venom injected to cause death. Lack of envenomation can be caused by the snake injecting too little venom; rattlesnakes do not always inject the total amount of venom they have available. Additionally, the venom gland-fang mechanism of the snake might malfunction, and in some instances the fangs do not hit the victim directly resulting in little injection of venom. It recently was estimated that about 25 percent of all poisonous snakebites in the United States do not inject enough poison to produce symptoms of venom poisoning. Probably the figure is much higher because outpatients were not included in the study. A recent study placed the percentage of insufficient venom injection at about “40 to 50 percent of all poisonous snakebites.”⁷

Rattlesnake venom is neutral or slightly acidic, containing a “mixture of proteolytic enzymes, neurotoxin, bacteria, cell detritus, various proteins, and electrolytes.” The neurotoxins kill the prey, and the proteolytic enzymes begin digestion proprietary to ingestion. The neurotoxin of Kansas snakes is of minor importance except in cases of massive poisoning. The proteolytic enzymes digest the tissue locally around the bite, destroy linings of the blood vessels, and inhibiting blood clotting through interactions with blood proteins. Additionally, the enzyme lecithinase causes destruction of red blood cells.⁸

7. Henry M. Parrish, *Poisonous Snakebites in the United States* (New York: Vantage Press, 1980), 328, 330; Henry M. Parrish, J.C. Goldner, and S.L. Silberg, “Poisonous Snakebite Causing No Venenation,” *Postgraduate Medicine* 39 (March 1966), 267.

8. John W. Schmaus, “Envenomation in Kansas,” *Journal of the Kansas Medical Society* 60 (June 1959): 238.

TABLE 1

Number and percentage of bites recorded in each of the warm-weather months, 1870s

<u>Month</u>	<u>Number of bites</u>	<u>Percentage</u>
March	2	2.4
April	3	3.7
May	9	11.0
June	18	22.0
July	16	19.5
August	11	13.4
September	17	20.7
October	6	7.3

In an attempt to counteract the effects of rattlesnake venom, a variety of “remedies” was used on those unfortunate individuals who were bitten on the plains of western Kansas. These remedies fell into four categories: whiskey, either alone or with one of the following; incisions or excisions, usually in combination with sucking the poison from the wound or amputations; some kind of cauterization; and a poultice of some sort, either to neutralize the poison or to draw it out.

Over the centuries many “folk” remedies for poisonous snakebites have been used. Because of the limited knowledge of snakebite, venom, and the circulation of those poisons within the body, most folk treatments were ineffectual. In some instances, the “remedy” may have caused the death of the victim. These remedies, passed from generation to generation, were not based on scientific studies. Rather, they were founded on past experience—trial and error. During the treatment of a bite, a therapy was used and, if the patient survived, the remedy was deemed effective, notwithstanding the fact that the person probably would have survived regardless of the treatment.

Early newspaper accounts frequently reported the names of individuals bitten and whether they lived or died. Occasionally newspapers gave a graphic description of the circumstances surrounding the bite and sometimes included the therapy used. Newspapers also devoted brief articles to the various methods used to treat snakebite victims, thereby helping disseminate the folk remedies.

Although many folk remedies were practiced by Kansas settlers, the use of alcohol was the only remedy sanctioned by the medical profession. Whiskey was the alcohol of choice. Of the forty-seven newspaper accounts that reported treatments for rattlesnake bites, twelve involved whiskey. It was believed that any amount of whiskey could be given to a person who was bitten by a venomous snake without causing injury. Indeed whiskey was thought to be an antidote for snakebite, actively seeking out the poison within the victim’s body and destroying it. It fre-

quently was administered in prodigious amounts.⁹ We now know that alcohol depresses the central nervous system. Among other things, this results in suppression of the respiratory system and can be fatal. There is little doubt that alcohol poisoning, rather than venom, was the cause of death in many snakebite victims on the Kansas frontier. In four newspaper accounts, whiskey was the only remedy used. In eight other instances, it was used in combination with other procedures.

Mr. George Risley was bitten by a rattlesnake, yesterday morning, on the farm of Mr. Forest Savage. Up to four o’clock yesterday afternoon he had drunk two quarts of whiskey without any particularly visible results of the usual nature. He will doubtless recover from the effects of both the bite and the whiskey.¹⁰

Large amounts of whiskey, especially when administered to a child, whose smaller body could not withstand the effects of alcohol as readily as an adult’s, could easily have resulted in death. Although whiskey was given to the child described in the following passage, the amount is not mentioned; presumably it was not enough to cause additional problems.

A little three year old girl of Mr. Wentzler, residing about six miles northeast of this place, was bitten by a rattlesnake last Friday. She was in the garden picking peas, when the reptile struck her in the calf of the right leg. Dr. Gibboney was immediately summoned, who found the limb considerably swollen, but by the administration of whiskey and other remedies the working of the poison was arrested, and at last accounts the child was in a fair way to recover.¹¹

Probably the most natural reflex when bitten by a poisonous reptile is to place one’s mouth over the fang marks and suck on the wound to remove the

9. Klauber, *Rattlesnakes*, 886–88.

10. *Ford County Globe* (Dodge City), June 18, 1878.

11. *Osborne County Farmer* (Osborne), July 5, 1878.

poison. This was recorded in seven of the newspaper accounts. This method perhaps had some value if the bite was superficial and the remedy applied immediately after the bite. However, if the bite penetrated more deeply into the muscle this method was of little benefit.¹²

A young son of Mr. Charles Caldwell, who lives east of town, was bitten by a rattlesnake one day last week. The child's mother sucked the poison out of the wound; and he is now out of danger.¹³

The use of a tourniquet or some method to constrict the area between the bite and the body, often in combination with incision and sucking, was a very common method used to treat snakebite. It only has been within approximately the past twenty years that this method has fallen into disfavor unless the victim is far removed from a treatment center. If the constriction is too tight to allow blood circulation, gangrene can occur and death result. If a ligature is used it should only be tight enough to restrict lymph flow and not blood flow, thereby minimizing the danger of gangrene.¹⁴

The finger was immediately tied, and remedies applied as soon as possible. Under a liberal use of whiskey, etc., Mr. [Ira] Johnson has recovered sufficiently to be able to be up and around again.¹⁵

12. Klauber, *Rattlesnakes*, 863.

13. *Hays City Sentinel*, August 22, 1879.

14. Klauber, *Rattlesnakes*, 871; Jonathan A. Campbell and William W. Lamar, *The Venomous Reptiles of Latin America* (Ithaca, N.Y.: Cornell University Press, 1989), 7.

15. *Inland Tribune*, August 19, 1876.

Incisions frequently were made prior to sucking to increase the amount of poison that could be removed. Venom in the body spreads rapidly and if incisions were to be of benefit they needed to be done immediately after the bite. Incisions had little or no value in the cases of deep bites and are not advocated today.¹⁶

In many cases incisions may have permitted secondary infections to occur, thus compounding the problems.

A Mr. Pierce was bitten by a rattlesnake in the harvest field near Solomon last week, and had presence of mind enough to make several gashes with his pen knife into the wound, and then extract the poisonous fluid with his mouth. He is all right says the *Gazette*, which records the above.¹⁷

Perhaps a logical extension of the cut and suck method was to excise the flesh immediately surrounding the bite. This method had little benefit unless applied quickly to a superficial bite. If the bite were deep this remedy was useless. In any case this method undoubtedly increased patient trauma and the chance of secondary infection.

Mrs. Bouchard was bitten in the hand by a rattlesnake last Wednesday, which came very near proving fatal. As soon as she could get in the house, she took a razor and cut out the part bitten, but it seems not deep enough to take out the poison. It swelled very rapidly, and she suffered excruciating agony until the arrival of Dr. Weaver, from Marquette. Then he alleviated her sufferings

16. Campbell and Lamar, *The Venomous Reptiles of Latin America*, 7.

17. *Ellsworth Reporter*, July 15, 1875.

to a great extent, but still she suffered terribly, and is not nearly over it yet, but is out of danger.¹⁸

Frequently the wound was cauterized either by using hot metal or a caustic chemical with the hope that the cauterization would destroy the poison before it had time to take effect. This treatment had little or no benefit because the poison is rapidly absorbed by the tissues and does not remain in a localized area around the bite.¹⁹

One of the grangers in the sparsely settled district known as the Upper Solomon, was bitten by a rattlesnake, last Friday. Upon receiving the wound, the sufferer cut a huge chunk of flesh from around the part the venomous fangs had penetrated, and cauterized the quivering flesh with a heated iron. Our informant, Mr. Hoyt, says that at the last accounts the man was getting along finely.²⁰

Gunpowder was also used for cauterization.²¹ In the following reports it was mixed with egg and salt before being applied as a poultice.

Mrs. A. S. Dimook, of Valley, was bitten slightly, on the foot last Friday, by a young rattlesnake. A rubber shoe which she was wearing at the time, protected her so that the bite was not serious. An application of soda, followed by a salve composed of equal parts of egg, salt and gunpowder, was made and the wound only swelled slightly.²²

18. *Saline County Journal* (Salina), October 9, 1879.
19. Klauber, *Rattlesnakes*, 868–70.
20. *Hays City Sentinel*, May 18, 1877.
21. Klauber, *Rattlesnakes*, 869.
22. *Hutchinson News*, June 29, 1876.

Even amputation of the extremity bitten was advocated. This was an ancient remedy, logical but drastic. Although for this study no examples were found of its use during the time period in question, one newspaper suggested the poisoned limb be cut off above the bite and “boil the stump in fresh milk.”

Milk, an ancient remedy for snake bite, was used either internally or externally.²³ In one interesting account milk was infused directly into the bite.

The *Wichita Eagle* says: A little girl, living near Eureka, while playing in a harvest field, was bitten on the ankle by a prairie rattlesnake. A young Swede who was working in the field at the time, got some milk from a cow standing near by, and inserted a small straw in each of the holes made by the fangs of the snake, and poured some milk into the straws which counteracted the poison, and within an hour the child was playing around as usual.²⁴

A large number of plants and plant derivatives were taken internally or included in externally applied poultices to treat snakebite. One of these was corn snake root.

Dr. J. H. Oyster in *Kansas Farmer*.

Use rattlesnake’s master—cynium aquaticum—sometimes called corn snake-root. . . . The root is the part used, either green or dried, but the green is best. Take about the same quantity as you would of any other herb and steep in sweet milk; drink as much as the stomach will bear, and apply

23. Klauber, *Rattlesnakes*, 868, 878; *Kirwin Chief*, September 6, 1876.
24. *Ellsworth Reporter*, June 29, 1876.

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some to the bitten part. It may be used several times during the day. It is my opinion that it would prove an antidote to mad dog bite. It should be used internally, and poultice made and applied to the bitten part. This should be done as soon as bitten.²⁵

Another remedy was prepared from plants of the genus *Indigofera*. Sometimes indigo was mixed with other ingredients such as salt, iodine, alcohol, and sorrel and used as a poultice. In other cases, the indigo was used directly.

Pulverized indigo is said to be a sure cure for snake bites. Mr. W. A. Singer, who resides in Sumner county, near Clearwater, has tried it upon several occasions with the best results. . . . The indigo was sprinkled over the wound rapidly, absorbing the virus. This is a simple remedy, always on hand in every household, and as the occasion for a remedy may arise at any time, it may be well to remember this.²⁶

The use of tobacco as a poultice or as an ingredient in a poultice dates to 1615. Sometimes tobacco juice was taken internally. If the patient did not get ill it was believed that the tobacco was effective. More frequently, however, tobacco was used as a poultice, either alone or with other ingredients. One newspaper recommended a poultice of tobacco together with camphor, a derivative of the camphor tree.²⁷

Onions also were used as a cure. They were utilized in medieval times and in this country as early as 1753 in Louisiana.

Take onions (if green, tops and all) mash them fine, spread on a cloth large enough to cover all the

25. Klauber, *Rattlesnakes*, 879–85; Ronald M. McGregor et al., *Flora of the Great Plains* (Lawrence: University of Kansas Press, 1986), 593. Corn snake root is also known as button snakeroot, *Eryngium yuccifolium*. *Ford County Globe*, July 16, 1878.

26. T.M. Barkley, *A Manual of the Flowering Plants of Kansas* (Manhattan: Kansas State University Endowment Association, 1968), 202. The only species of indigo in Kansas is *Indigofera miniata*. Klauber, *Rattlesnakes*, 884; *Hays City Sentinel*, June 20, 1879.

27. Klauber, *Rattlesnakes*, 884; *Kinsley Graphic*, August 16, 1879.

swollen part, sprinkle on some salt, and apply immediately. Change the poultice every fifteen minutes, for the first hour or two. If badly swollen, scarify slightly with a sharp knife.²⁸

In addition to using milk, other poultices utilized animals, derivatives made from animals, and animal byproducts. In some cases the animal derivative was combined with plant ingredients. Hog lard was a recommended treatment for snakebite as early as 1752. The fat from swine was considered to be superior because hogs were thought to be immune to snakebite, the theory being that “a rattlesnake’s fangs cannot reach a hog without applying the remedy (the fat) at the same time.”

Ed Kearney was bitten by a rattlesnake last Tuesday while binding wheat. He used tobacco and whiskey first, then tried indigo and lard, the latter application seemingly doing the most good. He is able to be about again.²⁹

Hartshorn was sometimes used as a remedy. It was made from the antler of a buck deer and was an early source of ammonia. The following remedy combined a tourniquet, cut and suck, hartshorn, and sweet oil. Olive or sweet oil was a remedy that dated to at least 1200 A.D. in Europe.

Snake bites, etc.—Apply immediately strong hartshorn and take it internally; also give sweet oil and stimulants freely; apply a ligature right above the part bitten, and then apply a cupping glass.³⁰

Olive oil was tested by various scientists during the eighteenth century and deemed useless. However, it continued to be used well into the 1800s. In the following case the treatment was supplemented by the individual’s faith in the Almighty.

28. *Wichita City Eagle*, June 3, 1875; Klauber, *Rattlesnakes*, 883–84.

29. *Osborne County Farmer*, July 10, 1879; Klauber, *Rattlesnakes*, 889.

30. *Hutchinson News*, March 20, 1879; Klauber, *Rattlesnakes*, 889.

The Cedarvale Times tell of a woman being bit by a young rattlesnake, and after the limb had swollen fearfully cured herself by the applicated [*sic*] of olive oil, after the fashion of the Apostles in olden times. She belongs to what is known as the Free Methodist denomination, and believes in faith and prayer. The matter has caused considerable discussion among religious circles.³¹

Some treatments of snakebite on the Kansas frontier bordered on the bizarre. The “split-chicken” remedy was a treatment in which a chicken was killed and its flesh pressed against the bite as a poultice. As the venom was extracted from the victim the chicken’s flesh would turn green or its comb blue.

A little girl in Wilson county who had been bitten by a rattlesnake was immediately cured by the application of the body of a fresh killed chicken to the wound.³²

Eggs, in various forms, were early ingredients for snakebite treatment. They were a part of Louisiana folklore and were used in California in the 1850s. Frequently, eggs were one in a combination of poultice ingredients.

Dr. Cornell’s remedy is infallible. One table spoonful of gunpowder, and salt, and the yellow of an egg, and mix so as to make a plaster; place on a cloth and apply to the wound, letting it extend an inch on all sides of the wound. As the poison is drawn the plaster will lose its sticking qualities, and when full will fall off. Apply a new plaster until it sticks which is sure evidence that the poison is all out. This will cure a snake bite on either human or beast.³³

Some poultices principally used inorganic materials. One of the most common comprised either am-

monia, soda, or both. Although found to be ineffective by 1787 it was continued to be used for some time. Because venom is slightly acidic and ammonia and soda are alkaline, it was thought that they would neutralize the effects of the poison.

Little Katie, a ten-year-old daughter of Mr. Chris. Mullen, who lives two miles up the railroad was bitten twice by a rattlesnake while in the field with her father last Saturday. It was a terrible wound; but the prompt use of soda and ammonia outwardly and whisky inwardly saved the child’s life.³⁴

Inorganic chemicals iodine and potassium iodide also were applied to snakebite wounds. Some medical practitioners in the latter nineteenth century considered this treatment a specific antidote for rattlesnake venom.

Mr. James A. Hopkins has presented us with a recipe for curing snake-bit . . . 30 grains Iodine, 30 grains Iodine Potassium, 1 ounce of water. Bathe the wound or keep moist with lint or cotton saturated with the solution. A cure is said to be certain from 5 to 20 minutes. The above was promulgated by the Smithsonian Institute at Washington.³⁵

Zinc chloride, a known disinfectant and antiseptic, also was used.

The best remedy for that purpose is chloride [*sic*] of zinc, 20 grains to the ounce of water, applied to the wound. If much time elapses before the application is made to the wound, the patient should take chlorate of potassa 15 grains once in two hours until the swelling subsides. The patient should be kept in a perfect state of quietude from the beginning.³⁶

Salt has been used as a snakebite remedy since early Rome and has been used for rattlesnake bites as

31. *Kirwin Chief*, July 3, 1878; Klauber, *Rattlesnakes*, 889.
32. *Ellsworth Reporter*, August 3, 1876; Klauber, *Rattlesnakes*, 876–78.
33. *Hutchinson News*, July 16, 1874; Klauber, *Rattlesnakes*, 879.

34. *Hays City Sentinel*, May 9, 1879; Klauber, *Rattlesnakes*, 892.
35. *Kirwin Chief*, June 12, 1878; Klauber, *Rattlesnakes*, 893.
36. *Hutchinson News*, September 18, 1873.

early as 1765. Salt was shown to have no direct effect on venom as early as 1787, but its use continued for at least another century.

Mr. A. Fenmore's little boy was bitten by a rattlesnake yesterday. He is getting along first rate. The remedy used was wet salt, bound on the bite and changed every five minutes. It is a good remedy.³⁷

Salt frequently was used in conjunction with other poultice ingredients such as fresh pork, soap, and garlic.³⁸

Prayer was common when a family member was bitten. According to some newspapers, faith in the Lord also played a vital role in the treatment of snakebite.

There was a lunatic in the city Tuesday who had a little girl with him who had been bitten by a rattlesnake the day before. He would not allow any remedies used, and said he was curing her by "faith." The girl was said to be doing well, but we would rather risk a little whiskey and ammonia. Faith is considerably cheaper if it will work.³⁹

Coal oil (kerosene) was yet another poultice ingredient used on the Kansas frontier. Kerosene was thought to be a specific antidote for venom, seeking it out and neutralizing it. It was supposed to offer visual proof of its efficacy by turning green as the poison was extracted.

Please publish in your paper that coal oil is a sure cure for a rattlesnake bite. Apply it with a

37. *Ford County Globe*, June 25, 1878; Klauber, *Rattlesnakes*, 892.

38. Klauber, *Rattlesnakes*, 883–84.

39. *Hutchinson News*, October 4, 1877.

cloth to the wound two or three times. Have known the cure in the neighborhood for seven years, and have never known it to fail on man or beast. Subscriber.⁴⁰

In the first printed account of treatments for snakebite, mud was cited as a remedy. Treatment varied: sometimes the extremity was buried in mud; other times mud was used as a poultice or part thereof.

A small boy was bitten by a rattlesnake a few days since, near the farm of James Wiley, on Buffalo creek. Dr. Craig, of Guilford, was called to attend the case. The boy was fully recovered. The doctor has tried the following remedy often, and has always met with success. He says:

For the treatment of snake bites I generally give

bromide of potassium in sufficient whisky to dissolve it well, every half hour. To allay the pain, apply aqua ammonia and sweet oil to the bite, and overlay with mud. This will cause quietude in a short time; then give aqua ammonia, according to the age of the patient, every three hours, for about three days.—*Neodesha Citizen*.⁴¹

The sad case of the Briery child not only illustrates how the bitten girl tried to use mud to alleviate the effects of the venom but also provides a good example of the detailed reporting of rattlesnake bites sometimes found in the early frontier newspapers.

40. *Great Bend Register*, July 3, 1879; Klauber, *Rattlesnakes*, 890.

41. *Saline County Journal*, June 8, 1871; Klauber, *Rattlesnakes*, 893–94.

OSBORNE COUNTY. It is our task to record one of the most painful incidents that has ever come within our knowledge, resulting in the agonizing death of a young lady from the effects of a bite by a snake. A daughter of Mr. J. G. Briery, who resides on Twin creek, aged some thirteen or fourteen years, went with her brother, last Saturday morning, to his claim, some five miles distant, where he was doing some work, and the two expected to return together in the afternoon. They changed their plans, however, and about three o'clock the girl set out for home on foot and alone, carrying a pail in which to gather some wild berries on the way. Later in the evening her brother returned home, and great was the surprise to find that the girl was still absent. Search was immediately instituted, but went on without any avail till two o'clock Sunday. The pail she carried was found by the roadside about two miles from home, partly filled, which seemed to confirm beyond a doubt the great fear that some awful fate had delayed her return. Mr. Ward and another party who were engaged in the search, at last heard a call, and proceeding in the direction from which it came, beheld one of the most shocking and heartrending sights the imagination is capable of picturing. There, sitting upon the ground in a nearly denuded state, they found the poor girl by a pool, where she had found her way and endeavored to extract the poison which the fangs of a hateful rattlesnake had buried in her foot, by burying it in the soft mud. All this time she had remained there alone and experienced the symptoms of a horrible death approaching, for the venom was working in her

More children than adults were snakebite victims, probably showing children's lack of caution as they played and explored.

system, and she must have suffered the most intense agony. Although sufficiently conscious to discern and call for help when it was near, her denuded state indicated that her sufferings had at times at least, driven her to frenzy. One of the party who found her went at once for her father who came with a team and she was conveyed home. Nothing, however, could be done by human hands to relieve the sufferer—it was too late, and in the evening the great panacea, death, which always comes to the relief of the sufferer when anguish is too great to be borne, rescued her from her terrible misery.⁴²

Based on early newspaper reports, more children than adults were snakebite victims—fifty-one children (62 percent) and thirty-one adults (38 percent). This statistic probably reflects children's lack of caution as they played, explored, and did their chores. Of the eighty-two individuals bitten, thirty-six (43.9 percent) died and forty-six (56.1 percent) lived. Of those thirty-six who died, thirty (83.3 percent) were children and six (16.7 percent) were adults. Likely, death resulted from the difference between adult and child body sizes. Children have less body mass to assimilate and therefore are more apt to succumb to the effects of the poison as it spreads through their bodies. Of those forty-six who survived the snakebites, twenty-one (45.7 percent) were children and twenty-five (54.3 percent) were adults.

42. *Russell County Record* (Russell), July 12, 1877.

Obviously rattlesnakes were an environmental hazard for at least some western Kansas settlers, although the number of deaths attributed to snakebite during 1870–1879 appears to be inordinately high when compared with data from Kansas during the past half-century. Perhaps, as previously suggested, many snakebite victims died not from the venom but from a “treatment.” Alcohol poisoning, gangrene, and secondary infections most certainly contributed to the number of fatalities. As time progressed and settlers learned more about the habits of rattlesnakes they undoubtedly became more cautious during their daily activities and took precautionary measures such as wearing protective clothing and boots.

Rattlesnakes still exist in Kansas but probably in fewer numbers than in the 1870s, although this cannot be accurately measured. Many western rattlesnakes utilized prairie dog towns, and although numerous at one time, large towns are now gone. Mechanization undoubtedly has depleted the numbers of snakes. Modern vehicles, traveling at relatively high speeds, provide little opportunity for a snake to move out of their paths. Road-killed snakes are a common occurrence. Disks, combines, hay balers, and other farm machinery likely have killed many rattlesnakes. Finally, the unfortunate predisposition of humankind to believe that the only “good” rattlesnake is a dead one, coupled with increased numbers of people living in and traveling through western Kansas, have eliminated even more.

Today people are more removed from the environment of the rattlesnake than they were in the 1870s. Farmers no longer walk barefoot behind the plow, shock wheat by hand, or manually rake hay. They are far more removed from direct contact with the surface of the soil than were farmers of the 1870s. Today few campers sleep on the ground. They utilize trailers, pickup campers, recreational vehicles, and tents that can be completely closed; all effectively remove the individual from the snake’s environs. If individuals do hike through the prairie, they rarely, if ever, are barefoot.

Still, a few individuals are bitten each year, but death seldom results. Given our modern systems of communication and transportation, most snakebite victims are only minutes away from modern medical facilities. Effective antivenins are available to neutralize the effect of the venom. In the entire United States, estimated fatalities due to poisonous snakebites range from nine to fifteen per year. Kansas has recorded but a single death in the last forty-seven years.⁴³



43. Klauber, *Rattlesnakes*, 806–14; Carl H. Ernst, *Venomous Reptiles of North America* (Washington D.C.: Smithsonian Institution Press, 1992), 8; F.E. Russell, “The Clinical Problem of Crotalid Snake Venom Poisoning,” in *Handbook of Experimental Pharmacology*, New Series, 52 (New York: Springer-Verlag, 1979), 985; Anthony Acerrano, “Poisonous Snakes: How Dangerous Are They?” *Sports Afield* 205 (June 1990), 64. For Kansas snakebite death statistic, see Joseph T. Collins, *A Guide to Great Snakes of Kansas* (Lawrence: Kansas Nature Guides, University of Kansas Natural History Museum, 1996), 27.