

BISON IN PIONEER WEST VIRGINIA

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ELKINS, WEST VIRGINIA

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The legendary buffalo of North America is not truly a buffalo but a bison, the largest member of the family Bovidae which includes goats, sheep antelope, and cattle. The existence of the American bison (*Bison bison*) was inextricably interwoven with the life of North America's indigenous cultures as well as the early European settlers. They, in large part, provided sustenance and protection from the elements for a whole race of people. To the early settlers they were also a source of food and fur for trading and their trails provided roadways into the vast wilderness of yesteryear. These trails were particularly important in very difficult terrain like the forested mountains.

Incalculably vast numbers of bison once existed in North America. There were many reports of bison seen on the grassland plains darkening the landscape for miles out of sight. Its nearly complete extermination by the early 19th century east of the Mississippi and in the western plains by the 20th century was indeed a crime, the fact being it was generally quite purposeful. Garretson (1938) stated it was generally accepted that the government saw the extermination of the bison as a way to defeat the Indians. One man killed 600-700 buffalo along a salt spring in Ohio in one year (Branch 1962). The killing of this animal, which could provide so many products usually resulted in tremendous waste, sometimes not used at all, sometimes shot and only the tongue was taken.

It may be surprising to some that bison ranged quite extensively in what is presently West Virginia. The Allegheny mountains, for the most part, were the eastern extent of its range. The herds in this region were never large compared to those of the plains but they made an impact on the environment, benefiting man by creating the major access trails to the area.

Frequent accounts were made of their presence in historical literature of the area. Almost never was there a formal attempt at documenting their presence but record occurred as incidental mention only.

Herein I have attempted to compile references made to the bison from historical records in what was once western Virginia. Any mention of buffalo was recorded and attempt was made to locate it on a map of West Virginia which accompanies this report. The approximate location of buffalo trails is also included in this map.

Most of the research was done through county history books and journals of early explorers into the area which can be important sources for clues on presettlement populations of other wildlife and flora. I have used the libraries of Davis and Elkins College (W. Va. Collection and Archives), W. Va. University (W. Va. Collection, Forestry Library, West Library, Evansdale Library, and Health Sciences Library), Marshall University (Special Collections, Morrow Library), and the W. Va. Department of Culture and History, Cultural Center, Charleston.

I hope that this research will contribute to West Virginia's biological history as well as providing clues to the whereabouts of a rare and endangered plant that is believed to be associated with buffalo trails in the Trans-Allegheny area (Bartigis 1985), running buffalo clover (*Trifolium stoloniferum*). As with many species both plant and animal, their importance does not always occur to us until it is gone or nearly gone, the loss of the buffalo, due to the complex interrelationship of life may have resulted in the near loss of yet another species.

My thanks go to Brian McDonald of the WVDNR for his idea for and supervision on this project.

BISON IN WEST VIRGINIA

The American bison range was quite extensive. It extended from the western portions of Georgia in the south to the western part of northern New York in the north, being more densely populated in western Pennsylvania and western Virginia. The bison occurred occasionally east of the Allegheny mountains (see map) but generally the Alleghenies were the eastern boundary. He ranged all throughout the central states in large numbers into the Rocky Mountains in the west. The northernmost boundary of their range was to Great Slave Lake in Canada's Northwest Territory and to the south into Mexico to about the twenty- eighth degree of North Latitude (Garretson 1938).

In western Virginia in the 18th century buffalo herds were not large compared to the buffalo of the plains and even to those of the cane brakes and grasslands of Kentucky, but were still quite numerous. References in historical literature give herd size from about 3 individuals to several hundred. Colonel Crogan viewed a vast herd crossing the Ohio River at Letart in 1765 (Ambler 1937). From the mouth of the (Great) Kanawha River he also wrote that the buffalo, turkey, and bear are so plentiful that one good hunter without fatigue could supply 100 men with meat daily (Jakle 1977).

It appears the main population of buffalo existed along and between the Great and Little Kanawha Rivers where it was said there was much interval of open land, as there was also on Buffalo, Fishing, and Wheeling Creek (Allen 1876). Albert Gallatin stated that during 1784-85 buffalo were so abundant on the southern side of the Ohio between the Great and Little Kanawha that during 8 months he had lived principally on their flesh (Carpenter 1931). Colonel Broadhead, Commander at Fort Pitt sent friendly Delaware Indians to the Great Kanawha to spend the winter killing buffalo to supply troops of 300 (Garretson 1938).

The bison of North America is divided by some into 2 subspecies: wood bison (*Bison bison anthabasca*) and plains bison (*Bison bison bison*). Others think that any dissimilarities in the American bison are due to different environmental conditions where they occur (Garretson 1938) and blood analysis thus far doesn't conclusively dispute this (Peden and Kraay 1979, Ying and Peden 1977). Nevertheless, bison in western Virginia were described as wood bison, being larger, darker, with more even proportions front to rear, and fur that was curlier than the plains bison. Two small natural or wild herds of wood bison still exist in a protected area in MacKenzie Bison Sanctuary, Northwest Territory and Elk Island National Park near Edmonton, Alberta (Ying and Peden 1977).

The bison is a gregarious animal, at times dangerous and unpredictable and thought by some to be stupid. The latter quality probably stemming from their strong herding instinct that would lead them to a mass grave in a miry swamp or deep ravine. This same instinct leads the adult animals to encircle the calves when threatened by wolves or while ruminating on their stamping grounds.

Bison are actually quite agile despite their enormous size (up to 3000 lbs.) and disproportioned appearance. They can go up and down steep banks better than either horse or man. Allen (1876) remarks on their "expertness and fearlessness in climbing" and with a little head start, they can even outrun a horse (Haines 1970). They can roll over onto their backs with little effort and will use this action to "wallow" themselves in mud or dirt for the purpose of removing shedding fur or to provide a protective covering from insects. They can right themselves quite quickly and seemingly in one motion. This action would create circular depressions in the ground sometimes several feet deep and were called wallows.

Bison were once considered a migratory animal with seasonal movement north to south and east to west. It has since been argued that they are really not

migratory, but may take seasonal treks of short range (McHugh 1972 and Dary 1974). In western Virginia it was generally believed that buffalo that summered along the Great Kanawha would winter in Kentucky, following a route through Teays Valley, and also in Ohio, by way of Thirteen Mile Creek to cross the Ohio at Letart. Other mention is made of buffalo being present throughout the winter in what is presently West Virginia (Garretson 1938 and McWhorter 1915).

Since bison are a grassland species, why did they exist in the woodlands as far east as the Allegheny mountains? Two principal ecological influences are believed responsible for its "recent" movement eastward, even believed by Garretson (1938) to be as late as the 17th century A.D. One influence is that of man. First, there was the occupancy of the Ohio Valley area by the Hopewellian culture. Among these were a highly developed culture of mound-building Indians who were mainly agriculturally dominated communities. They apparently did not know the buffalo as a food source. The Algonquins, late in the 15th century moved south and partially occupied this region vacated by the Hopewellian culture. Along with them they brought the strong hunting tradition tied to the use of fire. The old fields left by the previous culture were burned annually and enlarged to create meadows in the woodlands (Jakle 1967). These rich grazing lands along with a sparse human population furthered the expansion of the bison eastward.

Few early explorers of the region failed to mention the presence of openings or meadows in the woods. Christopher Gist, one of the first explorers into the region along the Ohio River observed in March 1752 "a great many cleared fields covered with white clover" along present day Middle Island Creek, Tyler county (Mulkearn 1954). He also found some meadows and an old Indian road along Wheeling Creek in the northern panhandle of the state.

(Gist's job for the Ohio Company was to describe the land over which he traveled so his journals provide interesting reading for those interested in presettlement flora and fauna.) White clover is also mentioned by Joseph Doddridge, a member of one of the first families that settled in or near what is presently the northern panhandle of West Virginia in the time period of 1763-83 (Doddridge 1824). He said fields cleared of weeds would return in white clover. There is also a place called Clover Lick in Pocahontas county that was named due to the presence of clover near a deer lick prior to the Revolutionary War. Running buffalo clover is the only native white clover of this area. Miller and Maxwell (1913) stated that white clover in West Virginia survived until that time in close cropped pastures and lawns.

George Washington wrote in his journal in 1770 while traveling through the remote wilderness of western Virginia concerning the "large proportion of meadow ground" on the big bend in the Ohio River below Letart (Moore 1971). Letart was once a major river crossing for the Kanawha buffalo trail running east to the Greenbrier River where it branched going north and east. Washington also mentions an abundance of excellent meadows along the Ohio and Kanawha Rivers in advertisements to lease his land in 1773.

The Kanawha buffalo trail led to a native bluegrass plateau 3 miles southwest of Lewisburg (Dayton 1942). This was called Savannah by the Indians meaning cleared field or prairie. Several early historians mention native bluegrass would come in where the land was cleared of timber in limestone areas (Teter 1977, Norton 1916, Miller and Maxwell 1913, and Motley no date).

Writing in 1848 from old original manuscripts, Hildreth (1848) speaks of the yearly autumn fires of the Indians replaced the woody vegetation with "buffalo clover, and the wild pea vine, with various other indigenous plants and grapes, supplying the most luxuriant and unbounded pastures to the herds

of deer and buffalo, which tenanted the thousand hills on the borders of the Ohio". Elsewhere pea vines were described as part of the native pastures for the bison along with winter fern in central West Virginia, Braxton county area (Sutton 1919).

The Rev. David Jones in January 1773 remarks on the "pasturage is so good" at the mouth of the Guyandotte River (presently Huntington) that it feeds an abundance of buffalo" even in winter (McWhorter 1915).

Old fields were apparently abundant along the South Branch in West Virginia's eastern panhandle when early settlers arrived. Thomas Cresap took possession of one old field opposite the mouth of the South Branch River in 1747 (Miller and Maxwell 1913). Others were along the Potomac River between Cumberland Md. and Keyser, W. Va. Old Fields in Hardy county, so named to describe its original appearance, was indirectly described as containing thickets of plum and other shrubs twined with grape and here and there a large tree separate open glady spots that, where dry, were covered with strawberries. Wild hay was cut here in 1747. Washington camped here early in his career and described the meadows as a grazing land for large game.

Valleys explored along the New River near the present Virginia-West Virginia border in 1671 were described as containing many "brave meadows and old fields" some even containing cornstalks (Miller and Maxwell 1913). This was believed by Morton (1916), a Monroe county historian, to be near Gap Mills in Monroe county.

In 1753, early settlers to the Tygarts Valley discovered large tracts of land over which the forest had but recently encroached and smaller areas still in sod (Miller and Maxwell 1913). The same was seen by James Parsons in 1769 on the Cheat River 40 miles distant. He found trees of even age growing through cobblestone floors and previously cleared fields.

In describing the western Virginia landscape in 1768, Thomas Hutchins (1778) writes repeatedly of meadows, meadow lands, and intervals that existed along the rivers that flow into the Ohio River and on the land between these rivers eastward to Monongahela River. Apparently, these meadows were here when the white settlers arrived for very few settlers lived in this area outside of the forts prior to the date Hutchins wrote his description. Hutchins also describes "extensive natural meadows, or Savannahs" on the northwest and southeast sides of the Ohio River below the Kanawha River and "at a little distance from it". They contained "many beautiful groves of trees interspersed, as if by art in them, and which serve as a shelter for the innumerable herds of Buffaloe, Deer, &c. with which they abound." These meadows were from 20 - 50 miles in circuit. We can take liberty to assume he is referring to some of the area between Pt. Pleasant and Huntington.

The second influence to the eastward movement of bison and probably equally important to the creation of meadows is the availability of numerous salt springs. These were areas where whitish-blue salt brine rose to the surface or formed salt incrustations in the soil. These areas were called "licks" by early explorers and settlers due to the earth being licked sometimes to great depth and breadth by buffalo, elk, and deer. Jakle (1967) believes that salt springs were the ecological factor that brought the buffalo to its eastern range. Of course, without an adequate food supply buffalo could not afford to go hundreds of miles for salt. Therefore, the availability of open meadow lands with good grazing and the many salt springs that existed in this area probably worked together to provide relatively good buffalo habitat. Also hunting pressure must have been fairly low without many resident Indians here.

Descriptions of salt licks in Kentucky state that hills were reduced to

valleys and that vast space of land around was "desolated as if by a ravaging enemy" (Jakle 1977). One hunter claims to have seen over a thousand at Blue Licks at one time (Allen 1876). It is doubtful that the licks in western Virginia were ever used to the extent these were in Kentucky. It has been verified by unearthing of bones that some of these salt springs were used by prehistoric animals in present day Kentucky. In West Virginia this has occurred also. McWhorter (1915) visited a salt spring on Bone Creek, a tributary of the Hughes River, Ritchie county in 1879. He described the spring as being at the head of a shallow marshy ravine in the creek bottom where deep paths made by animals in the bank of the ravine were still visible. Prehistoric bones and Indian relics were found here and nearby. Another description of a lick was given by John Hacker in 1769 of the lick at present Cleveland (originally Buffalo Lick), Webster county (McWhorter 1915). It was at the source of a ravine, circular in form, rock bottom and about 11 yards in diameter, with several small springs issuing from the bluffs, all unpalatable saline water. The sign of buffalo, deer, and elk surpassed any he had ever seen.

Probably the most famous salt lick in pioneer West Virginia was "The Great Buffalo Lick" on the Kanawha River near present day Maulden. The lick was 700- 800 yards in extent a few hundred yards above the mouth of Campbell's Creek (Laidley no date). It had been a salt source for Indians prior to the coming of white men. It drew such an abundance of buffalo, deer, and elk from up and down the Kanawha buffalo trail and from the north that many hunters were attracted here including Daniel Boone who made a settlement opposite the river (Hale 1876). This area was the center of the later developing Kanawha Valley salt industry. There were many other salt licks throughout present day West Virginia as can be ascertained by looking at a map for the place

names containing the word lick. A considerable number of towns whose names designated a lick have been changed since the name no longer seems significant. Example: Hacker on his trip tracking the buffaloes that ate his corn crop in 1769 stopped at a lick which was named Hacker's Lick (later changed to Hacker Valley), at Buffalo Lick (now Cleveland), and Fork Lick (now Webster Springs) (McWhorter 1915).

Some of the other famous salt licks were Webster Springs, White Sulphur Springs, and Bulltown on the Little Kanawha River in Webster county. Salt makers reported seeing scores of buffalo ruminating in the shade adjacent to the salt lick at the forks of the Elk and Back Fork Rivers (Webster Springs) (Dodrill 1915). Gist in 1752 even found a large cave on Fishing Creek, Wetzel county with a saltish clay lick in it that had been used by elk, buffalo, and deer (Mulkearn 1954). He reported a herd of about 30 elk nearby.

Salt springs funneled herds into specific sites thus creating major trails which were part of an intricate network of branching trails. The main hard packed paths (sometimes several feet deep) used for movement from one area of the country to another or salt spring to salt spring were joined by lesser paths to meadows, fresh water, wallowing or stamping grounds. These trails were paths of least resistance; easy grades were followed using mountain gaps and shallow stream crossings. Buffalo's normal tendency was to traverse the ridges but would of course divert from these to secure water etc. Other strategic movements would open up portages between the headwaters of streams (Hulbert 1902). In Kentucky the trails were described as wide (enough for 2 wagons abreast), rough, and muddy, nearly devoid of vegetation (Jakle 1977 and McHugh 1972). No description of this kind was found for West Virginia. Jakle (1967) states that the impact on the environment by the buffalo paths was probably not as great outside of Kentucky.

There exists some disagreement among historians over whether certain trails were created by the buffalo or the Indians. It has been said that pioneers could tell the difference between trails because in some writings they would mention a buffalo trail and later an Indian trail (Miller and Maxwell 1913). It has been said that Indian trails and buffalo trails followed the ridges (Hulbert 1920); that buffalo trails were straight and Indian trails went around obstacles in snake-like fashion. Some even believe that buffaloes were not here long enough to create deep worn trails (Jakle 1967). However, I believe there is good argument for the idea that some of the trails were used by both. The obvious usefulness of mountain passes and shallow water crossings must have funneled both onto the same path. And if the historic Indian had a reason for being in this area it was to secure game and sometimes salt, both good reasons for following buffalo trails. Although the point should be made that prehistoric Indians may have created many paths before the buffalo came this far eastward. My attempt here was not to determine the origin of the major trails in pre-settlement West Virginia. I therefore, in the accompanying map, have presented the historic trails of the area at that time whether identified by some as Indian or buffalo trails. It should also be noted that trails shown are main, long distance, interconnected paths and numerous trails branched off of these that aren't shown. It is most likely if there was a salt spring in an area with historical evidence of buffalo then a trail led to that spring, such was the attraction of these places.

Because of the wise engineering features of buffalo travel many former buffalo trails were later followed in road and railroad building. One noteworthy example of this was the Great Kanawha Trail from Pt. Pleasant to Lewisburg, an undisputed buffalo trail. It was historically known as the General Lewis path and followed by troops to the Battle of Pt. Pleasant (Johnston 1937);

turned into an improved road as early as 1782 (Conley 1970); and eventually the Midland Trail stage coach road (Reniers 1926). Also the Baltimore and Ohio Southwestern Railroad from the Potomac River to the Ohio at Parkersburg follows the old buffalo road (Jakle 1977), in some places quite closely. Gorhan's and Eaton's tunnels the buffalo trail could, at one time, be seen crossing the ridge above the tunnel (Johnston 1937 and Hulbert 1902). The old Parkersburg-Staunton Turnpike section from Tygarts Valley to the vicinity of Buckhannon is believed to follow the old buffalo trail. George Washington, traveling over it in 1784, called the McCullough Trail an old buffalo trail. It passed through Wardensville to Moorefield, Greenland Gap, then north of Gortner, Md., followed the Youghiogheny River north and then west through Preston county, W. Va. to the Cheat River (Comstock 1974 and Rice 1970). The last buffalo seen in the glades near Gortner was 1794 (Robinson 1963). The National Road or Nemaquin Trail from Cumberland, Md. and passing through about 15 miles of West Virginia to Wheeling was an old buffalo trail (Conley 1970).

CONCLUSION

Although considered a plains animal, the American bison existed also in the mountainous areas of the present state of West Virginia. The bison that existed here are believed to be the sub-species wood bison, a larger, darker, sure footed creature that could traverse the high mountains and steep ravines with apparent ease. The Allegheny mountains were generally considered the boundary of the eastern range of the bison but evidence exists to indicate some bison were present east of the Alleghenies in Virginia at the time of early settlement.

Bison occurred in the present state of West Virginia in numbers up to several hundred in a herd but more usually occurring in scattered smaller groups. The

numbers in a herd were probably relative to the size of the meadows available on which to graze. Along the Ohio and Kanawha Rivers and east to the Levels along the Greenbrier River where bottomlands were broad and ample with meadows larger herds could feed. But this does not mean that the bison didn't frequent the more remote mountains of central West Virginia. The meadows may have not been as extensive but were numerous and could support small herds scattered throughout the region. There is sufficient evidence to show that they were attracted to salt springs and found glades and old fields created by the Indians in such mountainous areas as Braxton and Webster counties as well as the entire area between the Little Kanawha and Kanawha Rivers.

The entire state was crisscrossed with buffalo trails when the first European settlers arrived. Some of these trails were still visible 100 years after the last bison was gone from the area. Several trails branched out east from Wood county, one following the Little Kanawha River over to the Tygarts Valley where numerous trails came together, the meeting place of more trails than any other place in the state. The Indian old fields of the South Branch Valley in the eastern panhandle attracted the herds east from there creating the trail later known as the McCullough Trail, a frontier trail used by early explorers and settlers. This trail and others provided access to the Trans-Allegheny from the east and were well engineered, following the most direct route over the easiest grades and for the most part along ridgetops. Many of their former trails have been followed, at least in part, in later road and railroad building. The Baltimore and Ohio Southwestern Railroad from the Potomac to Parkersburg a case in point and the old Midland Trail from White Sulphur Springs and Lewisburg west through Teays Valley as one of the most famous buffalo trails of the state. In a sense we are still following primeval pathways.

Aside from their long-distance trails, the side trails may have appeared as a confused tangle of paths leading in various directions to meadows, salt springs, fresh water, wallowing and stamping grounds, although it is believed salt-springs were the foci of their major trails. Salt springs were quite numerous-throughout the region and these springs along with the meadows created, by the Indians were the ecological factors that allowed the movement of the bison eastward into the forests in relatively recent history. Buffalo apparently were not known to the prehistoric mound-building Indians of this area for examination of their refuse heaps revealed a lack of bison bones

There is only approximately 75 years of recorded history of the bison in West Virginia. The last bison and her calf were killed in 1825 near Valley Head, Randolph County. There exist a few interesting tales and many incidental references in early journals and old county histories indicating they were a common part of the frontier experience. It will also become quite apparent that bison were known by the early settler if one looks at a map of the region and takes note of the streams, towns, and high peaks named after the buffalo. And look also at all the place names with the term "lick" used. This was to indicate the presence of a salt spring that attracted the buffalo, deer, and elk so strongly.

My attempt herein was not to relate each of the various references to buffalo in this area from history but this has been done on the map and index to it which accompanies this paper, along with the approximate location of their major trails and historical references to elk in the state.

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INDEX FOR POINTS ON MAP SHOWING W. VA. HISTORY

1. A town named for the bison trail that cuts through this valley to the Ohio (Ref. #1)
2. Grassy glade country named Buffalo Cow Pasture in 1790's probably where Cowen now is (Ref. #1)
3. Tributaries of the Elk River; Buffalo Creek and Little Buffalo Creek, so named because the two streams were "great buffalo ranges" where the wild herds had access to salt licks. (Ref. # 1)
4. Four sites on John Hacker's buffalo hunt in 1769. Hacker Valley was originally called Hackers Lick because John Hacker killed a buffalo at a lick there. (Ref. #1) Cleveland was originally called Buffalo Lick and the buffalo, deer, and elk sign here surpassed any Hacker had ever seen. (Ref. #1). Glade above the falls of the Little Kanawha where buffalo grazed (Ref. # 4). Crane Camp Creek where Hacker killed a deer where buffalo had stopped at a lick. (Ref. #4)
5. Two sites of old fields or Indian old fields. It was noted by George Washington while passing through this region that old fields and wild meadows were used as pasture by large game (Ref. #'s 1 & 9)
6. Elk City and Elk Creek named for a lick nearby which the elk frequented. (Ref. #1)
7. Elk Garden, formerly Elk Pond, named so because many elk frequented a lick there. (Ref. #1)
8. Elkhorn Creek - large bull elk killed here. (Ref. #1)
9. Elk River so named because numerous herds of elk roamed the stream bank in pioneer days. Indian name for this river translates to "Plenty of Fat Elk" (Ref. #1)
10. Elk View so named because from there was a good view where elk gathered. (Ref. #1)
11. Coco, formerly Ellick (until 1888), so named because there was a salt lick here in earlier times. (Ref. #1)
12. Letart is site of a major buffalo trail crossing on Ohio River. (Ref. #11) Colonel Croghan, in 1756, reported seeing a vast herd crossing at Letart. (Ref. 4)
13. Clover Lick so named because, before the American Revolution when area was seen for the first time, there was a deer lick there with clover growing nearby. (Ref. #1)
14. Rev. David Jones noted in Jan. 1773 of the area near the mouth of the "Great Guindot" that pasturage is so good that even at this time of year creatures are well supplied including an "abundance of buffalo" (Ref. #4)

15. Buff Lick (originally Buffalo Lick), now a hamlet of coke ovens was once a famous swamp and salt spring where buffalo and other animals once came. Also known as Great Buffalo Lick and Buffalo Big Lick. Center of what later became the Kanawha Valley salt industry. (Ref. #1, 29, 47, 50)
16. George Washington, in 1770, found here "buffaloes and other wild game in great abundance". (Ref. #4)
17. Christopher Gist, in 1752, killed four buffalo while camped at the mouth of Pond Creek then called Lawwellaconin Creek. (Ref. #4 & 30)
18. Christopher Gist, in 1752, found a large cave on Neemokeesy (now Fishing Creek) Creek with a saltish clay lick frequented by elk, buffalo, and deer. There was reported by him a herd of about 30 elk nearby, of which and he killed one. (Ref. #4 & 30)
19. Elk Creek - 1772 seven buffalo killed here. (Ref. #4)
20. Last buffalo killed in Kanawha county north of the Kanawha River on Little Sandy Creek about 1815. (Ref. #4)
21. Last elk killed in this area on Two Mile Creek about 1820. (Ref. #4)
22. Elk killed on Red Creek about 1840. (Ref. #4)
23. Three elk killed near Davis on Black Fork of Cheat River about 1843. (Ref. #4)
24. A buffalo cow was killed here and creek named Granny 's Creek because of the buffalo being very old and tough. There is a salt spring on this creek. (Ref. #4)
25. Last buffalo killed in Braxton county on lands owned by Lewis Harris on Buffalo Creek, year unstated. (Ref. #8)
26. Last buffalo seen in region of Huntington about 1805. (Ref. #4)
27. A salt spring located at the head of a shallow marshy ravine in the bottom along Bone Creek was used by large mammals both historic and prehistoric. The trail to this spring was still visible in 1879. Numerous bones and teeth were found at this site on the old Somerville farm (Ref. #4)
28. George Washington reported that for about a mile below Big Sandy Creek there was a sedgy ground and along this creek the Indians reported there were many buffalo. The Indians would cross the Ohio on rock walls following the buffalo trails to the salt licks (Ref. #4 & 13)
29. George Washington noted a herd of buffalo at the mouth of the Great Kanawha. (Ref. #13)
30. Washington noted a large portion of meadow on the big Ohio River bend south of Ravenswood. (Ref. #13)

31. Three miles north of Lewisburg off Rt. 219 on Echols Farm (originally the Archer Mathews Old Place) was an "animal wallows or gravelly spring" around 1780. (Ref. #14)
32. The spring here attracted buffalo and deer due to its salt content. The former salt makers found scores of buffalo ruminating in the shade near the spring. (Ref. #37)
33. Three miles SW of Lewisburg was a famous bluegrass plateau called The Levels (and called Savannah by the Indians). There were buffalo trails that led to the levels which were 20 miles long and 2-5 miles wide. (Ref. #15)
34. Christopher Gist described fields covered with white clover adjacent to Middle Island Creek. He described these "cleared" fields as being a great many in number in March 1752. (Ref. #30)
35. Bulltown is site of old buffalo salt lick: salt was manufactured here by the Indians. One and one fourth miles below the hamlet is the original spring (Ref. #1)
36. On Missouri Creek near Erbacon traces of buffalo trail were still discernible in 1931. (Ref. #'s 2 & 9)
37. Last buffalo was killed in the state near Valley Head in 1825. (Ref. #'s 2, 18, & 43)
38. Bison killed at Gandeville around 1815. (Ref. #'s 1 & 18)
39. Two buffalo killed on the West Fork in 1791. (Ref. #4)
40. There was a great buffalo lick where the waters of the Holly River join the Elk. (Ref. #22)
41. At the former site of Fort Ashby near Gortner, Md., four buffalo were seen in 1794. Two buffalo were killed in this glade country, the last ever seen here (Ref. #17)
42. A herd of buffalo were seen along Sang Run around 1796, Two were killed (Ref. #17)
43. The McCullough Trail, used by Washington in 1784, was referred to by him as an old buffalo trail. (Ref. #4)
44. Old buffalo lick was once here, later mined for salt. (Ref. # 86)
45. Last buffalo killed in Boone county on Little Coal River about 1825. (Ref. #47)
46. Last elk killed in area on Indian Creek about 1825. (Ref. #47)
47. Old buffalo lick on a small island in Kanawha River. (Ref. #47)

48. Buffalo killed on Big Sandy in 1785. (Ref. #4)
49. Last buffalo killed in Webster was killed on Buffalo Bull Knob in 1825, (Ref. #1) or on Valley Fork Elk R., Randolph County (Ref. #43)
50. Old salt spring used by buffalo where Granny's Creek joins the Elk. (Ref. #2)
51. Buffalo Creek was so named because of the quantities of buffalo grass found there by the first settlers. (Ref. #4) Buffalo grass was a preferred grass to the buffalo and nearly disappeared after the demise of the buffalo in the west. (Ref. #82)
52. Buffalo and deer were once attracted here by the salt in the spring. Hunters discovered the spring by following the tracks of the animals. (Ref. # 9)
53. Cleared meadows were found here by an exploring party around 1671. These were believed to be created by the Indians to attract wild game such as buffalo and deer. (Ref. #21 & 28)
54. A buffalo was killed on Grass Lick of Steer Creek, year unknown. (Ref. #8)
55. Christopher Gist killed two buffalo near here in Feb. 1752. (Ref. #30)
56. Buffalo were so plentiful on the Little Kanawha River in 1780 that Col. Brodhead sent hunters there for a supply of meat for use by his troop of 300 at Fort Pitt. (Ref. #82)
57. Christopher Gist found meadows here and an old Indian road. (Ref. # 30)
58. A mile or so from Stewartstown in a long narrow hollow running back from Cheat River was a "Buffalo Pond". Indians used this as a trap for buffalo. (Ref. #4)
59. Last elk seen and killed in Webster was killed in the Gauley River around 1815. It was followed from the Chestnut Bottom ford some distance above the mouth of Bergoo across the headwaters of Bergoo and Leatherwood to Sign-Board Ridge then to middle of Gauley River above the mouth of Straight Creek. (Ref. #37)
60. Elk shot at a lick near the head of Sandy (Gandv?) Creek, a tributary of Dry Fork in 1830. (Ref. #4)
61. A buffalo wallow or stamping ground was once on a low gap east of Buckhannon Run and between that stream and Rover's Run. It was a stiff red clay over a quarter of an acre devoid of timber and from one to two feet deep. (Ref. #4)
62. Salt Pond Mountain Lake was surveyed by Gist in 1751. It was known by the early settlers to attract vast numbers of buffalo, elk, and deer. It was also once known as a deep depression into which flowed several salt springs that attracted "cattle". (Ref. #'s 7 & 21)

63. Believed to be the site of an old salt sulphur springs where deer, buffalo, and elk came when the area was first settled, near Cubana. (Ref. #43)
64. Dr. Thomas Walker and his party killed several elk including on large buck while camped on Tug Fork River, June 1750. (Ref. #7)
65. The B & O Railroad is said to follow an old buffalo trail. It is so close to the original trail in places that the buffalo trail crossed the ridge twice where the train goes through a tunnel at Eaton's tunnel and Gorham's tunnel. (Ref. #'s 23 & 45)
66. There is early report of buffalo and elk in the Shenandoah Valley. A well-defined trail existed between Rockfish Gap in the Blue Ridge and Buffalo Gap in the North Mountain. (Ref. #27)
67. Last buffalo killed in Pt. Pleasant area in 1815. Last elk killed in region in 1820. (Ref. #13)
68. Capt. Nathan Boone killed buffalo near the Big Sandy in 1797 & 1798. (Ref. #4)
69. Buffalo Springs and Buffalo Ford in the region of Amherst, Va. were so named because the former was a salt lick which had a buffalo trail to it and the latter was where a well worn trail crossed the river. This is believed to be an extension of the Kanawha buffalo trail. A few miles below Blowing Cave and Wallawhatoola Springs is a salt lick near the ford. (Ref. #34)
70. Early chronicles tell of buffalo herds frequenting the low divide between the Kanawha and Ohio Rivers. (Ref. #18)
71. A man was reported hunting buffalo along the James and Shenandoah Rivers in the 1730's. (Ref. #4)

RECOMMENDATIONS

In doing the field work to locate the running buffalo clover (*Trifolium stoloniferum*) the following recommendations are made due to the plant's supposed association with the historic bison.

1. Due to the fact that the last buffalo in the state were seen at the following locations:
Little Sandy Creek, Kanawha county
Buffalo Creek, Braxton county
Huntington, Cabell county
Valley Head, Randolph county
Gandeeville, Roane county
Little Coal River, Boone county
Valley Fork of Elk River, Randolph co. Buffalo Bull Knob, Webster county
I would suggest concentrating on the area running west to east from Gandeeville to Valley Head and south to the Kanawha River.
2. Check should be made at old salt spring sites listed below as well as any sites with place names using the word lick. Numbers used below refer to map locations.
6. Elk City and Elk Creek
11. Coco
13. Clover Lick
14. Great Buffalo Lick (developed)
15. Cave on Fishing Creek
27. Bone Creek
31. Echols Farm
32. Webster Springs (developed)
35. Bulltown
40. Mouth of Holly River
44. Near Blue Bend
47. Island in Kanawha River
52. White Sulphur Springs (developed)
62. Salt Pond Mountain Lake (in Va.)
63. Cubana
3. Check historic old meadow areas, especially ones near major buffalo trails that have experienced disturbance but not grazed heavily or cultivated. Check edges along fence lines and where it hasn't been plowed but occasionally mowed. The clover may have had a better chance for survival here than on old trails that may have grown up in timber or are roads now.
4. Check known historic clover sites like along Middle Island Creek, Pleasants, Tyler, and Doddridge counties (site 34) and Clover Lick, Pocahontas county (site 13).
5. Check near Erbacon (site 36), Webster county for old buffalo trail that was still visible as late as 1931.
6. Check the B&O Railroad at Eaton's and Gorham's tunnels (sites 65). Old buffalo trail traversed the ridges above these tunnels at one time.

7. Braxton, Webster, Upshur counties had a concentration of references to buffalo and this is the general area where the last 2 bison were found in the state.
8. Check meadows next to the Ohio River especially below Letart and the area between the Kanawha and Ohio Rivers, Mason county. There were many salt works here at one time so there must have been salt springs historically. Check area along Thirteen Mile Creek (old trail followed this stream) and also south of Ravenswood (area much frequented by buffalo).
9. Concentrate especially on areas that have continued to be disturbed, forget thickly forested areas for the most part. Of course this doesn't apply to open areas within forests that have been that way for 200 years. Remember that the clover probably won't survive in places where it has been grazed without relief.

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