A century ago, on February 1863, the Kansas Legislature established the State Normal School of Kansas, which is now the Kansas State Teachers College of Emporia. Kansas was a young state, having been admitted as the 34th state of the United States of America only 14 years before, on January 29, 1861, when President James Buchanan approved the admission of Kansas into the Union.

The times were not easy or pleasant, either for the nation or for the young state. For almost a decade from its first settlement in 1854, "Bleeding Kansas" had been a term for the rough times. More than 20,000 Kansans were in military service. In 1863 occurred the Quantrill raid on Lawrence, the killing of 400 Osage Indians by 20 Confederate officers. The fighting included many casualties among Kansas fighting in the Union force. The Battle of Gettysburg and elsewhere. In addition, raids and battles were still not less regular occurrences. The Medicine Lodge peace treaty was signed until 1867, and the last Indian battle, with the Cheyenne and Arapaho, was fought under the leadership of Dull Knife.

The Kansas School Naturalist is published in November, January, March, and May of each year by The Kansas State Teachers College, 1200 Commercial Street, Emporia, Kansas. Second-class postage paid at Emporia, Kansas.

The cover picture shows what the area about Lecompton looked like in 1858, according to Frank Leslie's Illustrated Newspaper, December 25, 1859.
A century ago, on February 15, 1863, the Kansas Legislature established the State Normal School of Kansas, which is now the Kansas State Teachers College of Emporia. Kansas was a young state, having been admitted as the 34th of the United States of America only two years before, on January 29, 1861, when President James Buchanan approved the admission of Kansas into the Union.

The times were not easy or pleasant, either for the nation or for the young state. For almost a decade, from its first settlement in 1854, “Bleeding Kansas” had been a battlefield. More than 20,000 Kansans were in military service. In 1863 occurred the Quantrill raid of Lawrence, the killing by Osage Indians of 20 Confederate officers encamped on the Verdigris River, and many casualties among Kansans fighting in the Union forces at Gettysburg and elsewhere. Indian raids and battles were still more or less regular occurrences. The Medicine Lodge peace treaty was not signed until 1867, and the last Indian battle, with the Cheyennes under the leadership of Dull Knife, came in 1878, when the Normal School was already 15 years old.

In February, 1863, a visitor to Kansas could travel only on wagon trails and a few miles of railroad, the first railroad having been started in 1860. The Santa Fe Trail, although past its peak, was to be in operation for 17 more years. The Pony Express had been discontinued only 16 months before. On the
Many windmills of this type were in operation in Kansas a century ago. This one in Lawrence was photographed in 1879 by J. R. Riddle.

trails the 1863 traveler saw no automobiles or trucks, only horse drawn carriages, wagons, and carts. On the farms he saw no tractors or combines. His view included no oil derricks, or radio and TV transmitting towers extending into the air; neither did he see any tall concrete grain elevators, now so familiar in the western two thirds of Kansas. In all of Kansas he could find no airport, concrete parking lot, or football stadium. He could send a telegram from only a few eastern border towns, such as Leavenworth and Wyandotte (Kansas City was incorporated in 1869) and could not make a telephone call anywhere in the state. The first telephones were installed in Kansas in 1877. There were no electric plants or transmission lines. A common source of power for the opera-

Lt. L. S. Kidder and ten men were killed by Indians on Beaver Creek in what is now Sherman County, July 1, 1867. This sketch shows the finding of their remains ten days later by members of Custer’s troops, who were enroute to Fort Wallace. From Harper’s Weekly, August 17, 1867.
of the 36 organized counties had populations under 1300, the most populous being Leavenworth County, with about 20,000 inhabitants.
A century ago, corn was grown by both Indians and early settlers in Kansas. The sketch of Indian women tending a Kansas corn field is from The American Indian by Clark Wissler.

The 1863 Kansas Scene

The Kansas landscape, from the rolling wooded hills of the east to the grass-covered high plains of the west, appeared about as it had for thousands of years. The fewer than 200,000 people who then comprised the population of Kansas had made only slight changes in the general appearance of the state.

Even in 1863, although total acreage under cultivation was small, agriculture had become fairly well established. The Kansas Agricultural Society, which had been organized as early as 1857, held its first annual statewide meeting on January 13, 1863, and the first State Fair in Leavenworth, October 6 to 9 of the same year.

The 1863 traveler taking a balloon trip across Kansas would have seen no bodies of water, except a few sloughs and marshes. Nearly all of the large Federal government impoundments; the city, county, state and private lakes; the strip-pit lakes; and the tens of thousands of farm ponds have been constructed relatively recently, nearly all within the past 30 or 40 years. Even though both the state board of agriculture and the state fish commissioner tried to encourage the building of farm ponds as early as the late 1870's, actual construction was slow. The first major water-impounding project in Kansas was the unsuccessful attempt in the 1890's to draw water from the Arkansas River in order to flood Cheyenne Bottoms (Stone, 1946). The filling of Cheyenne Bottoms was successfully accomplished in 1904, the area is now of major importance in wildlife conservation.

The Kansas Annual Report (1864) described the Kansas as follows:

The general topography of the state is much the same as the characteristics common to all countries. But few of the streams have current at ordinary stage, though most of the larger streams there are rapids, which invite the enterprise, and skill of the manufacturer and mechanical work. The Blue, Grasshopper, and Girls' Creek, north of the Kansas river, and the McCloud, Neosho and Verdigris, south of the state, have been to some extent improved, or waters made to contribute to the feeder of the Kansas river. The general condition of the stream, flowing through meadows, is clear and limpid, abounding in all the varieties of fish common to this latitude. The streams flow in deep channels or in the rich alluvial bottoms; their banks are usually precipitous, and not easily accessible for fishing or crossing.

Without mountains, or rugged sides for the creeks to course down, Kansas is deficient in available water power compared with many of the Eastern States. Most of the larger streams there are rapids, which invite the enterprise, and skill of the manufacturer and mechanic. While the Blue, Grasshopper, and Girls' Creek, north of the Kansas river, and the McCloud, Neosho and Verdigris, south of the state, have been to some extent improved, or waters made to contribute to the feeder of the Kansas river, the general condition of the stream, flowing through meadows, is clear and limpid, abounding in all the varieties of fish common to this latitude. The streams flow in deep channels or in the rich alluvial bottoms; their banks are usually precipitous, and not easily accessible for fishing or crossing.

The prairies of Kansas are divided into large areas or prairies, or divide. They first embrace alluvial bottoms bordering the streams level, but well drained of surface water.
River in order to flood Cheyenne Bottoms (Stene, 1946). The flooding of Cheyenne Bottoms was successfully accomplished in 1947 and the area is now of major importance in wildlife conservation.

The Kansas Annual Register (1864) described the Kansas scene as follows:

The general topography of the different portions of the State is much the same, and has the characteristics common to all prairie countries. But few of the streams have a rapid current at ordinary stage, though most of them flow a considerable portion of their length over rocky, or gravelly beds, and unless swollen by recent rains, their waters are clear and limpid, abounding in all the varieties of fish common to this latitude. All the streams flow in deep channels or gorges, in the rich alluvial bottoms; their banks usually precipitous, and not easily forded, except at the regular crossings.

Without mountains, or rugged rocky hillsides for the crops to course down, Kansas is deficient in available water power when compared with many of the Eastern States. But in most of the larger streams there are falls and rapids, which invite the enterprise, capital and skill of the manufacturer and mechanic; while the Blue, Grosshopper and Nemaha, north of the Kansas river, and the Marius de Cygnes, Neosho and Verdigris, south, have been to some extent improved, and their waters made to contribute to the welfare of the settler, and profit of the proprietor in grinding grain, sawing lumber, etc., etc.; and much more remains to be done to render useful the entire available water power of these and other streams. Hundreds of rapids in the State will furnish ample and profitable motive power for mills and manufactories from six to ten months in the year, and may be made to run nearly the whole year by flowing back, the banks in most cases admitting of this without damage or danger.

The prairies of Kansas are divided into what are usually known as the bottom, or valley of the river, the slope, and the high prairie, or divide. They first embrace the rich alluvial bottoms bordering the streams, nearly level, but well drained of surface water, and from one-half mile, to three and four miles wide; the soil a black loam, with more or less sand, and from two to six feet deep, usually with a clay sub-soil. Assimilating very nearly in character of soil, are the slopes of the bluffs and mounds which rise between the streams, nearly all of which are so gently inclined as to be easily cultivated. These, the bottoms and the slopes, are the richest and strongest lands and produce in great luxuriance nearly every variety of vegetable and farm product of the temperate zone.

Above the slopes, at the brow of the bluff, the limestone usually crops out, and for a few rods in width renders the soil unfit for cultivation, this little strip around nearly every hill constitutes the entire breadth of Kansas land not susceptible of tillage.

Beyond the limestone extends the long gently rolling, or nearly level prairie divide, the soil varying from a black to a reddish, or mulatto color, and from one to four feet deep. Many of the most valuable farms of the State are on these divides, and the almost fabulous harvests of wheat, rye, barley, corn, oats, and the grasses, prove conclusively that in the cultivator, in the bottom, has a formidable rival on the hill above; while in many things he enjoys superior advantages which help to make a good farm in a good situation.

These mounds and divides feed innumerable springs, which jut out of their sides or break out in the bottom below, forming little creeks and branches, furnishing an abundance of pure, cool water on almost every quarter section of land. Good wells are easily obtained in most localities, by digging from eight to thirty feet, and once a good supply of water obtained, they seldom fail to hold out through the longest drought.

The timber, with the exception of an occasional timbered hillside, is confined to the borders of the streams and ravines, and on the principal streams varies from one-quarter, to two or three miles in width. The Missouri, however, furnishes an exception to this, the timber standing back for considerable distance over the rolling hills, which lie for several miles west of the river.

Black walnut, three or four varieties of oak, elm, hackberry, cottonwood and hickory, are found on almost every stream; while most have, in addition, the basswood or lim, ash, wild cherry, paw-paw, wild plum, buckeye,
coffee bean, with other of minor importance; and on the banks of a few streams are found the beautiful nut-bearing pecan, and evergreen cedar.

The oak, black walnut and coffee bean, make valuable and durable fencing, and lumber; while the hickory, hackberry, elm, linden and cottonwood, though less valuable for some uses, are made available for many purposes in the improvement of the country.

But a small proportional extent of the State is timbered. Most of the broad acres lie ready cleared of stone and timber, and invite the husbandman to plant and prepare for the harvest, leaving him little else to do after he has enclosed them.

But many farms will be carried on in Kansas, and with profit, without the use of wood or timber in any shape, after the buildings are once erected. Kansas abounds in quarries of excellent lime and sand stone for building and fencing. Scarcely a farm but has an abundance of this material, and improvements once made from the quarries, the work is done for a life time, and no need of the annual repair of decaying fences, or dilapidated farm buildings. Added to this, the osage orange and other hedges flourish here in perfection, and enclosures with these are made with less expense than would be required under the most favorable circumstances to fence with rails, or lumber. Land may be fenced with osage hedge in from three to five years; when the proprietor can bid defiance to frost, fire, wind and troublesome stock, so long as he chooses to require a fence.

So far, then, the man who owns his timbered quarter holds his prairie neighbor at no great disadvantage in the long run.

How as to fuel? Plenty of it; access ready available, with ten times more to covered as demanded. Coal! Coal everywhere, and all around, no lack of the man whose mine crops out only six or twenty inches thick, complains that a three or four feet; while he who has foot mine grows because he has no deal or market for his coal. So abundant a valuable mineral deposit, that the coal discoveries show conclusively that even the same extent of country better supplies all that the future shows any probable demanding. In most localities it is retained for a trifling advance on the digging and hauling to market.

What then, with broad rich prairies for the plow; bright cool springs and
Some question exists as to the precise date of this map. This photograph includes only the Kansas portion of the Colton (1863?) Kansas-Nebraska map. It was probably drawn about 1860. Note that no counties were organized in the western half of the state, and that many counties had boundaries and names unlike those of 1963. Many towns and settlements existed in the eastern part of the state, agriculture was getting underway, and county administrative units were operating. Except for the Santa Fe Trail and a few military trails and forts, the western half of Kansas looked much as it had for thousands of years.

1863 Kansas Resources

Then as now, the Kansas climate was favorable for agriculture, which was largely restricted to the eastern part of the state, where rainfall was adequate for the crops grown then. The ground seldom froze more than a few inches, and

**Kansas abounds in quarries and lime and sand stone for building clap.** Scarcely a farm but has an access of this material, and improvements do from the quarries, the work is done in time, and no need of the annual re-decing fences, or dilapidated farm s. Added to this, the osage orange or hedges flourish here in perfection, unless with these are made with less than would be required under the favorable circumstances to fence with humber. Land may be fenced with edge in from three to five years; when water can bid defiance to frost, fire, and troublesome stock, so long as he to require a fence.

then, the man who owns his timbered side his prairie neighbor at no great disadvantage in the long run.

**How as to fuel?** Plenty of it; accessible and ready available, with ten times more to be discovered as demanded. Coal! Coal! Coal! everywhere, and all around, no lack of it, and the man whose mine crops out only eighteen or twenty inches thick, complains that it is not three or four feet; while he who has a four foot mine grows because he has no demand, or market for his coal. So abundant is this valuable mineral deposit, that the accidental discoveries show conclusively that never was the same extent of country better supplies with all that the future shows any probability of demanding. In most localities it is readily obtained for a trilling advance on the price of digging and hauling to market.

What then, with broad rich prairies ready for the plow; bright cool springs and creeks; an abundance of stone for all purposes needed; and amount of timber sufficient for present wants, and a sure prospect that future demands will be honored; and coal at your door for fuel; all this under the bright sun, in a most favorable climate: what more does the farmer ask to make home happy, and life prosperous? These only: peace, industry and contentment.
was ready to plow in March. In the southern part of the state, plowing was often possible during most of the winter. A growing season of 180 to 190 days made possible a wide variety of farm crops, garden vegetables, and fruits. The native grasses were well adapted to grazing.

The Kansas Annual Register went on to say that:

We can not speak of the mineral wealth of Kansas so confidently as of its agricultural resources, for less is positively known. Nothing, really, as to the result of systematic or scientific investigation or exploration. That there is scarcely a township in the State but has from one to twenty coal mines, is proved by accidental discoveries, and that the most of these will furnish a good quality of fuel, at small expense, is also known.

Very rich specimens of lead ore have been found in the southeastern part of the State, and in the opinion of many, paying lead mines will be discovered there as soon as proper effort is made.

This fence in Chase County is thought to have been built before 1872.

West of Fort Riley are large deposits of gypsum, or plaster of paris, and very extensive chalk bluffs; both of excellent quality. Rich specimens of tin, copper, silver and iron ore have been brought from that locality sufficient to demonstrate the probable profit of more patient and extensive research. Reports from all parts of the State show that the mineral resources of Kansas are much greater than generally supposed, and that they are destined to assume a prominent place as one of the elements of wealth and power, at the command of its citizens.

That numerous and rich salt springs exist in various parts of the state is also known; while quite a number of artesian wells bored for fresh water, have produced salt water at a depth of from one hundred to one hundred and thirty feet. One of these wells at Osawatomie is furnishing water for a salt manufacture, where is made as good an article of salt as the world can produce.

In the southwestern and western part of the State are the twelve springs selected by the State, and granted to the State by Congress. Some of these are said to be very valuable. To encourage the manufacture of salt, the Legislature, at its session in 1863, provided by law, that a premium of ten cents per bushel on the first ten thousand bushels manufactured should be paid out of the Treasury of the State to the first company manufacturing in any country, and to give the free use of any of the salt springs belonging to the State to any one who shall commence the manufacture of salt from the same.

It is no unsafe prophecy to say, that within ten years Kansas will not only supply the home demand, but will export salt.

As compared to 1863, farms were fewer, smaller, and more scattered in 1863. Only about one fifteenth as much land was under cultivation. The 10,500 farms averaged about 170 acres; now our 105,000 farms average more than 230 acres.

Many of the familiar crops of today were grown also in 1863—corn, oats, barley, potatoes, beans, peas—but some of the crops of a century ago would now seem strange in Kansas. Farmers were growing castor beans, cotton, hemp, tobacco, and silk, but no alfalfa, lespedeza, sorghums, soybeans, or hard winter wheat. Although the Indians were growing wheat as early as 1840, hard winter wheat did not come to Kansas until 1873, when German Mennonites brought this new crop into Harvey, McPherson, and McPherson counties.

Kansas farmers of 1863 gave much attention to weed insect pests. Native weeds thrive as well in competition the native grasses as they cultivated fields. When the sod broke the Kansas sod they produced more hospitable conditions for many species of weeds. In some of the weeds most common now were not present at all bindweed, Russian thistle, thistle, prickly lettuce, shepherd's purse, dandelion—all these introduced in the 1870's. The sandbur was first seen in 1891, and chickweed did not come until 1921. Farming practices and transportation were not as expensive as now.

It seems from early agric reports that grasshoppers were the only serious insect Chemical pesticides were not used, although the use of Paris green to control Colorado potato beetles was not far in the future, as in Kansas about 1870.

NATIVE FLORA

In his paper on the Kansas presented before the meeting of the Kansas Academy of Science, Professor J. H. C. Carruth (1873) of the University of Kansas listed about 540 species rep-
In 1863 Kansas farmers did not give much attention to weeds or insect pests. Native weeds did not thrive as well in competition with the native grasses as they do in cultivated fields. When the settlers broke the Kansas sod they provided more hospitable conditions for many species of weeds. In 1863 some of the weeds most common now were not present at all. Field bindweed, Russian thistle, Canada thistle, prickly lettuce, shepherd’s purse, dandelion—all these were introduced in the 1870’s. The Mexican sandbur was first seen in 1870, and chickweed did not come in until 1921. Farming practices and transportation were not as conducive to the spread of weeds in 1863 as now.

It seems from early agricultural reports that grasshoppers were about the only serious insect pests. Chemical pesticides were not yet in use, although the use of Paris green to control Colorado potato beetles was not far in the future, starting in Kansas about 1870.

NATIVE FLORA

In his paper on the plants of Kansas presented before the 1870 meeting of the Kansas Academy of Science, Professor J. H. Carruth (1873) of the University of Kansas listed about 540 species representing 88 families of seed plants, 9 species of ferns, and 3 of horsetails. In his report on Kansas botany for the year 1873 Carruth (1873) reported about 175 additional species. The following year he added about 140 more and said that he thought botanists might expect to find about 1200 species in the state.

Taking into account the changes in taxonomy that have occurred during the past century, one does not see striking differences between the 855 species of Kansas flora listed by Carruth in the three reports and a corresponding list that might be made now. To be sure, some species such as the native orchids have been greatly reduced or well-nigh exterminated while others such as the sunflowers have “met man on his own terms and have prospered.” But in most cases the lists of 1870 to 1874 look rather familiar. For example, under the family Ranunculaceae Carruth listed in 1870 three species of clematis, four windflowers, one meadow rue, one false rue anemone, one columbine, and three larkspur. The 1873 list added one clematis, one wildflower, and two crowfoot species; the 1874 list one each of clematis, columbine, and crowfoot.

The big difference between
1863 and 1963 is in the areas available to the native flora. The subduing of the prairies, which changed the vegetation on 25 million acres in Kansas from native to cultivated species, drastically reduced the areas in which native plants can be found. We have of course not been able or willing to plant all Kansas acres to crops; we have, however, forced the native plants into fence corners, roadsides, railroad right-of-ways, and the like. Even in pastures, over-grazing has often changed the distribution of plant species almost as much as has cropping.

The tall grass area of the Flint Hills has perhaps undergone the smallest amount of change. To preserve a part of this prairie, a Prairie National Park has been proposed, to be located in Pottawatomie County, near Manhattan, Kansas. The proposed park area of roughly 7 by 13 miles contains about 57,000 acres. It will give the visitor an opportunity to see the prairie as it was and by the first explorers.

Other smaller areas, set aside for study and research, will in large measure preserve conditions as they were in the past. These areas are not unchanged since 1863, but as time passes they will, as a result of natural processes, tend to return to the stable biological conditions that obtained before they were disturbed. Two examples are the University of Kansas Natural History Reservation near Lawrence and the F. B. and Rena G. Ross Natural History Reservation near Emporia.

WILDLIFE IN 1863

Those who had time to fish could find plenty of clear streams, but no lakes or ponds. They caught about the same species as now—bass, crappie, catfish. But there were some striking exceptions. Suckers and other clear-water species were more common throughout the State than they are now, because the streams had not become turbid with erosion from plowed fields. Sturgeon and paddlefish were often caught in the Kansas River and in some of the other larger streams. But there were no carp; these were introduced in 1880, with an initial shipment of 160 specimens from St. Louis (Long, 1883). They must have done well, for in 1885 Professor Cragin of Washburn College, now Washburn Municipal University, wrote that carp are “now raised for food in artificial ponds in all parts of the State.”

Those interested in hunting reptiles and amphibians would probably have found about the same species as now, although not much is known about the distribution of these animals in 1863. Concerning the history of Kansas herpetology, Smith (1950) wrote:

Although Kansas is the birthplace and home of a relatively large number of herpetologists, none of them has published a thorough account of all the reptiles and amphibians of the state. The nearest approach, but little more than a list of species, is Cragin’s “A Preliminary Catalogue . . .” of 1881, in which eighty-eight species and subspecies are listed, although subsequently many of these have been shown not to occur in the state. A few supplementary papers by Cragin (1885, 1894) added some species to the list for Kansas.

The actual “father” of Kansas herpetology was unquestionably Dr. Edward Hallowell, who in 1856 reported upon a very considerable collection of twenty-four species and subspecies obtained by Dr. W. A. Hallowell from “Kansas” (without further data, as when “Kansas” included an area much larger than it does at present).

Bird watchers of 1863 saw the same species as we do now, and the records date back to the works of the University of Kansas press before the 1870 meeting of the Kansas Academy of Science. A descriptive list of the birds of Kansas, based on six years of observation (Snow, 1873), listed 253 species, representing 39 families. These 253 species, 127 were found to breed in Kansas. As true wild birds, there were a few outstanding differences. The Carolina parakeet and passenger pigeon, now extinct, were seen occasionally, the turkey was “becoming rare in towns,” and the wood duck “good shooting and fine eating in August and September.”

Prairie chickens were abundant and sold in the markets for $1.25 to $3.00 per dozen, but were protected by game law from March 1 to August 1. On the other hand, no pheasants, starlings, house sparrows. The house sparrow (often inappropriately called English sparrow) was not known in Kansas until 1874, when five males obtained from North Carolina were released in Gage County (Barrows, 1858). Starlings were still more than 60 years in the future; the first authentic records date back to the winter of 1929-1930.

The white-necked raven, which was then called, the buffalo was common. Mead wrote in...
WILDLIFE IN 1863

who had time to fish could enjoy the clear streams, but no ponds. They caught about 20 fish species as now—bass, catfish. But there were striking exceptions. Suckers, water species were common throughout the state, but there were no paddlefish, which were often seen in the Kansas River and in the other larger streams. There were no carp; these were not known in Kansas before 1850, with an initial report of 160 specimens from St. Louis (1856). They must have been well, for in 1885 Professor Snow of Washburn College, worked that carp are “now for food in artificial ponds in the State.”

Bird watchers of 1863 saw about the same species as we do now. We do not have on record a state bird list for 1863, but Professor Snow of the University of Kansas presented before the 1870 meeting of the Kansas Academy of Science a descriptive list of the birds of Kansas, based on six years of observation (Snow, 1873). He listed 282 species, representing 39 families; of these 282 species, 127 were known to breed in Kansas. As is true of the fishes, there were few species differences. The Carolina parakeet and passenger pigeon, now extinct, were seen occasionally, the wild turkey was “becoming rare in towns,” and the wood duck was “good shooting and fine eating in August and September.”

The white-necked raven, or as it was then called, the buffalo raven, was common. Mead wrote in 1887: According to the information on the back of the picture this Kansas family and its pet elk were photographed by Alexander Gardner, Clear Creek, Kansas, along the railroad survey 498 miles west of St. Louis, in 1867.

The principal food was the carcasses of buffalo and other animals. Its senses of sight and smell were exceedingly acute. In the winter of 1867, during severe cold and deep snow, I observed large flocks of these ravens wintering in the belt of Black Jack timber north of the Cimarron (Red Fork river) south of the very abundant acorns. These handsome and very interesting birds have about disappeared with the buffalo, as have several other forms of animal life once very common on the plains.

The large mammals in 1863 were quite different from those of the present time. Beaver were common along most Kansas streams. Wolves were common associates of bison and lived largely on them. Black bears were found throughout the wooded parts of the state. The puma, often called mountain lion or panther, was found throughout most of Kansas, as were the bobcat and the lynx. Elk were probably state-wide in distribution. The blacktail or mule deer roamed over most of Western Kansas and the white-tailed deer over nearly the whole state. Antelope were abundant throughout the grasslands. Wild horses were present in considerable herds in Western Kansas. Professor Knox, of Baker University, wrote in
Kansas settlers received this publicity in Frank Leslie's Illustrated Newspaper on June 3, 1871, under the title "Shooting Buffalo on the Line of Kansas Pacific Railroad."

1875 that "the wild horse breeds in Kansas, thus entitling it to a place in our list of mammalia. Not infrequently when crossing the plains in the early part of the season the traveler's camp is approached by a troop of wild horses.

The champion of the large species of the wildlife was the bison, or American buffalo. These were still abundant in 1863, although decreasing rapidly. Knox reported, in the same paper in which he discussed the wild horse, that vast numbers were roaming over the western parts of the state, migrating north in the spring and southward beyond the Arkansas River in the autumn. He added that... "they are being slaughtered by ten thousand annually, for their hides, meat, bones, and the sport of killing them. Should not legislation put a stop to this wholesale destruction?"

That the destruction went on is shown by the report of Cragin (1885) only 10 years later, that: small herds of Buffalo, scattering remnants of their rapidly vanishing race, have this winter been chased with the usual wholesale 'success' in several of our western counties. They are probably the last, or about the last, that will be seen in Kansas. At best, it can be but a year or two until the Buffalo, once a highly characteristic creature of our prairie fauna, shall have passed, in its swift flight to extinction, beyond the limits of the State.

Prairie dog towns were large and widely distributed, but decreasing in numbers. Mead wrote in 1885:

As to Prairie Dogs, there were in those days (10 or 15 years following 1859) millions of them all over the first hundred miles west of the sixth principal meridian and the width of the State where my hunting and trading was principally done. When the Buffalo left and ceased to tramp the ground, and the tall grass grew, the Prairie Dogs perished or disappeared. They cannot live in soft ground or tall grass. The few Dogs remaining in the area mentioned live on hard pan spots. The great

In a later paper, Mead (1898) referring to the 1860's said prairie dogs were innumerable.

The divide between the Saline and Solomon in Ellsworth County and west was a continuous dog town for miles; and, as considerable portion of this locality was cut with horizontal beds of shale or limestone, the surface, it was a mystery where the water. Not a drop could be found several miles and none by digging the rock...

In his 1898 paper Mead wrote that

Hedgehogs, locally called porcupines, are very common on the streams between Saline and Solomon. They subsisted on bark and buds of the trees, climbing trees... They nested under shelving where such could be found, and brought two at a litter.

Some native mammals, such as the opossum, fox squirrel, spotted skunk, are now more numerous than they were in 1859. They have also extended their ranges westward. The chin brought about by agriculture, thinning of trees in groves and shadbelts, increased growth of riparian vegetation along streams, construction of official lakes and ponds, and building and maintaining various kinds of parks and reservations have brought about more favorable living conditions for these animals. Others such as the house mouse increased because the built environment made by man provide food shelter.
went on is... report of Cragin... years later, that:... great.

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Chisholm Texas cattle-trail... became a Dog town almost its entire distance, the Dogs moving into it to secure the necessary conditions for their existence; to wit, hard tramped and almost bare ground.

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In his 1898 paper Mead also wrote that

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Some native mammals, such as the opossum, fox squirrel, and spotted skunk, are now more numerous than they were in 1863. They have also extended their ranges westward. The changes brought about by agriculture, planting of trees in groves and shelterbelts, increased growth of trees along streams, construction of artificial lakes and ponds, and building and maintaining various kinds of parks and reservations have brought about more favorable living conditions for these animals. Other species such as the house mouse have increased because the buildings made by man provide food and shelter.


I am indebted to many people for help and suggestions in preparing this anniversary issue of *The Kansas School Naturalist*, particularly to the Kansas State Teachers College 100th Anniversary Committee with George R. R. Pflaum as chairman; to the Kansas State Historical Society, and to Eugene D. Decker and Robert W. Richmond of the Department of Archives and Manuscripts; and to my student assistant Ronald R. Aeschliman.

It is not too early to plan to attend the 1963 Workshop in Conservation, which will be a part of the 1963 Summer Session of the Kansas State Teachers College of Emporia, during June and July.

As in the past several years, the Workshop will cover water, soil, grassland, and wildlife conservation, with emphasis throughout on conservation teaching. Such topics as geography and climate of Kansas, water resources, soil erosion problems and control, grass as a resource, bird banding, wildflowers, conservation clubs, and conservation teaching in various grades will be discussed. There will be lectures, demonstrations, discussion groups, films, slides, field trips, projects, and individual and group reports. You may enroll for undergraduate or graduate credit.

Exact dates, fees, and other details will appear in later issues of *The Kansas School Naturalist*. For further information write the director, Mr. Thomas A. Eddy, Department of Biology, KSTC, Emporia.