

Chapter 1 : Southwestern United States - Wikipedia

Great Desserts of the American West: Sweet Endings and Treats from the West Coast to the Lone Star State Hardcover - August 28, by.

These parks form the backbone of his landscape work. His landscapes often depict steep and dramatic mountains, rock formations, and natural wonders—often with dark clouds. His paintings carry a high sense of drama. Can you see the stylistically different treatment of similar subjects? Moran made many trips to the national parks of the Western United States, and in later years, his status as the artist of the Grand Canyon was immortalized by the Burlington and Northern Railroad in its advertisements. Moran was adept in many artistic media, including gouache, watercolor, oils, printmaking, engraving, lithography, and watercolor. Frederic Remington, "The Trooper. Frederic Remington, "The Apaches. His paintings often tell a story. Frederick Remington Born relatively late in the 19th century, Frederick Remington always knew he wanted to be an artist. At age 15, he attended a military academy in New York State. He bought a saloon in Kansas and was bamboozled, but he eventually established a flourishing career as a fine artist, journalist, illustrator, and even war correspondent. He also got to marry his sweetheart! Remington was both a painter and a sculptor. His subjects often included cavalry officers, Native Americans, and horses. His cast bronze sculptures were reproduced at forges and sold in multiple copies in a series, similar to the idea of print making. He made all of his bronzes during the last 10 years of his life, which ended at the untimely age of 48 due to health complications. Remington was fascinated by what he called the "Old West," and he traveled in the West during his adult life collecting subject material. However, I am always struck by the almost manicured portrait of an artist wearing a stiff, Eastern suit. Frederic Remington, "The Bronco Buster" Frederic Remington Questions must be on-topic, written with proper grammar usage, and understandable to a wide audience.

Chapter 2 : American West Quotes (7 quotes)

The Great American Desert was the name given, in the first half of the nineteenth century, to the area west of the Mississippi river. At the time, the area was only inhabited by tribes of native American Indians. White Americans considered it to be unfit for habitation. As people moved onto the

Others thought the desert included an area miles wide lying directly east of the Rocky Mountains and extending from the northern boundary of the United States to the Rio Grande River. The section shown by the various geographies grew smaller every year until only sandy plains in Utah and Nevada bore the name desert. The Plains of Southwest Kansas The history of the development of this portion of the continent began with the earliest explorations in the New World. The expeditions following Christopher Columbus were made by Spaniards from the South. His journey took him to the mouth of the Mississippi River , where he suffered a wreck and only 15 of his men survived – eleven of these were killed by the Indians. The four remaining men were made prisoners and separated. Nunez, who was also known as Cabeca de Vaca , was carried by the Indians north into the great plains in sight of the Rocky Mountains. He and his companions became reunited, escaped the Indians and working their way slowly, found the Spanish settlement in Mexico in In Hernando de Soto left Spain to explore Florida. About the same time Coronado , inspired by the tales of Cabeca de Vaca, started north to find seven golden cities. His search for Quivira took him to what is now central Kansas. Pike, early s Early in the 19th century, the United States government sent out exploring expeditions. One of these was under the command of Lieutenant Zebulon Montgomery Pike , who in went west from St. Louis , Missouri to hunt the source of the Arkansas River. The restriction of our population to some certain limits, and thereby a continuation of the Union. Our citizens being so prone to rambling and extending themselves on the frontier will through necessity be constrained to limit their extent to the west to the borders of the Missouri and Mississippi, while they leave the prairies incapable of cultivation to the wandering and uncivilized aborigines of the country. The report of Major Stephen H. He considered a great part of the country unfit for cultivation, and uninhabitable by people depending upon agriculture for their subsistence. It is a land where no man permanently abides, for at certain seasons of the year there is no food for the hunter or his steed. The expeditions of Pike and Long were practically the last exploration work done by the government for several years. While the government was idle, private enterprise was working its way westward. The movement of westward travel was accelerated in when gold was discovered in California. Previously, overland travel had been very light, but in it was roughly estimated that 42, persons crossed the plains. The trip was full of every kind of danger. Caravans were attacked by Indians, storms, and disease, but many returned to settle in some favored spot. The lands along the streams were the first to be taken by the settlers. Gradually, the country yielded to the influence of law and order. Even the most dismal spots were developed into gardens of usefulness and beauty, by the work of irrigation; the government began doing much for the protection of forest and range; and by feats of engineering a variety of rich mines were opened; railroads crossed seemingly impassable plains; factories of all kinds sprung up; gases from underground were controlled for light and fuel; educational institutions opened their doors to millions of children, and churches of all denominations were erected. The free library, the telegraph, telephone, rural mail delivery, and all the complexities of modern times were soon crowded upon the Great American Desert. The majority of this historic text was published in Kansas: However, the text that appears here is not verbatim, as additions, updates, and editing has occurred.

Chapter 3 : 10 Best Books Set in the American West

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Of these, the former is a predominantly cold desert, receiving much snow in winter, and many parts are not much different in appearance to some of the adjoining lands. The other three are hot for most of the year and more closely resemble a desert of popular imagination, containing large areas with very little plant life, just sand and barren rocks, or sparse grassland, often mixed with many types of cactus. Outside these four large areas are other regions sometimes considered to be a desert but receiving too much rainfall to match the strict definition, and these include the Colorado Plateau of north Arizona and south Utah. Additionally there are several places named as a desert that again do not strictly qualify such as the Red Desert of southwest Wyoming, the Painted Desert of Arizona or the Escalante and San Rafael deserts of south Utah, while other named deserts fall within the larger regions, for example Black Rock Desert in the Great Basin, or Lechuguilla Desert in the Sonoran. The Great Basin Desert is largest in area, covering southeast Oregon, a small portion of northeast California, most of west Utah, part of southeast Idaho, and the majority of Nevada - all except the southernmost miles which are within the Mojave Desert, and some northern mountain ranges bordering Idaho. All this land is characterized by long, thin, parallel mountain ridges running north-south, separated by wider valleys, often containing dry lake beds playas or salt basins. The few rivers run inwards, with no outlet to the ocean; their waters ultimately either sink below ground or evaporate. Great Basin National Park and Golden Spike National Historic Site are the only NPS units in this vast region, all of which is lightly settled and has few spectacular natural attractions but does contain many smaller sites of interest like hot springs, volcanic remains, ghost towns, old mines and peaks up to 13, feet, plus many scenic drives. These pass scenery that while often not very desert-like in the traditional sense, is suitably empty and desolate. Other Great Basin Desert sites include: The topography is generally similar to the Great Basin, with isolated mountains and wide, flat plains, but temperatures are hotter, vegetation sparser, and the hills are less numerous. The most recognizable plant of the Mojave is the Joshua tree ; cacti are not so numerous but still include multiple species of opuntia , cylindropuntia cholla , echinocereus and others. The Sonoran Desert of southwest Arizona and the south-eastern tip of California has perhaps the most archetypal desert scenery in the Southwest, with vast flat plains and abundant cacti, especially the giant saguaro , which occurs most densely in Arizona towards the higher elevation reaches of the desert, between 1, and 3, feet. The desert is itself divided into subregions including the Colorado and Yuha deserts of California, the Yuma Desert of far southwest Arizona and the Arizona desert further east. It continues a long way south into Mexico, nearly miles down the east side of the Gulf of California. The main parks and preserves are as follows: It covers the southern third of New Mexico, excluding several mountain ranges, and all of far west Texas, west of a line between Del Rio and Monahans. Elevations are generally higher than in the Sonoran Desert 2, to 6, feet , and precipitation is a little greater, with most rain falling during the summer thunderstorm season. Cacti are still quite numerous but are generally smaller than to the west; instead, the dominant plants are yucca and agave, though even so, as with many other desert regions, large areas have only the ubiquitous creosote bushes and mesquite trees. The very remote Big Bend National Park is the best place to view the plants and animals of the Chihuahuan Desert, accompanied by spectacular mountain and river scenery. Cacti are specially abundant and include two dozen rare species found nowhere else in the US. Other preserves of the Chihuahuan Desert include:

Chapter 4 : The Great American West () - IMDb

American West - The Great American Desert - History American West "The Great American Desert American West The Great American Desert was the name given, in the first half of the nineteenth century, to the area west of the Mississippi river.

Ancient Pueblo Peoples ruins at Chaco Canyon Human history in the Southwest begins with the arrival of the Clovis culture , a Paleo-Indian hunter-gatherer culture which arrived sometime around BC. At some point they were replaced by three great Pre-Columbian Indian cultures: As the Puebloans transitioned from a nomadic lifestyle to one based on agriculture, their first domiciles were pithouses. The Hohokam were the last of these ancestral cultures to develop, somewhere around 1 AD, but they would grow to be the most populous of the three by AD, despite being the smallest of the three in terms of area, covering most of the southwest portion. By the end of the 15th century, all three cultures had disappeared. The area once occupied by the ancestral Puebloans became inhabited by several American Indian tribes, the most populous of which were the Navajo , Ute , Southern Paiute , and Hopi. The Navajo, along with the Hopi, were the earliest of the modern Indian tribes to develop in the Southwest. Around AD their culture began to develop in the Four Corners area of the region. Their village of Oraibi , settled in approximately AD, is one of the oldest continuously occupied settlements in the United States. The Apache migrated into the American Southwest from the northern areas of North America at some point between and In fact, it had the exact opposite effect, for the result of the rebellion was the establishment of the presidio at Tubac , the first permanent European settlement in Arizona. Over approximately the next 50 years, the Spanish continued to explore the Southwest, and in the City of Tucson was founded when the Presidio San Augustin del Tucson was created, relocating the presidio from Tubac. After passing through Colorado, they became the first Europeans to travel into what is now Utah. Their journey was halted by bad weather in October, and they turned back, heading south into Arizona before turning east back to Santa Fe. Mexican Alta California Upper California in pink. In Mexico achieved its independence from Spain and shortly after, in , developed its constitution , which established the Alta California territory, which was the same geographic area as the earlier Spanish province. In , Arizona was visited by its first non-Spanish Europeans, English trappers. In the Republic of Texas was annexed by the United States, and immediately became a state, bypassing the usual territory phase. The new state still contained portions of what would eventually become parts of other states. On December 29, the Republic of Texas was annexed, bypassing becoming a territory, and immediately becoming a state. With the Compromise of , the states of Texas and California were created Texas as a slave state, and California as a free state , as well as the Utah Territory and New Mexico Territory. Congress, with some slight alterations, in April The boundary modification in also included adding the southern triangular tip of the present-day state, taken from the Arizona Territory. On August 1, , Baylor declared the creation of the Arizona Territory, and claimed it for the confederacy, with Mesilla as its capital. By May confederate forces had been driven out of the region by union troops. That same month a bill was introduced into the U. Territory of Arizona, splitting the New Mexico Territory at the th meridian. In silver was discovered in southeastern Arizona. The notorious mining town of Tombstone, Arizona was born to service the miners. Production began in , and was made more profitable by the expansion of the railroad throughout the territory during the s. The early s also saw the completion of the second transcontinental railroad, which ran through the heart of the Southwest, called the "Sante Fe Route". It ran from Chicago, down through Topeka, then further south to Albuquerque, before heading almost due west through northern Arizona to Los Angeles. By , with the splitting off of the Arizona Territory, New Mexico reached its modern borders. They became states within forty days of one another. On January 6, , New Mexico became the 47th state in the Union. The various definitions can be broken down into four main categories: As time has gone on, the definition of the Southwest as become more solidified and more compact. In the early years of the United States, newly colonized lands lying immediately west of the Appalachian Mountains were detached from North Carolina and given the name Southwest Territory. During the decades that followed, the region known as "the Southwestern United States" covered much of the Deep

South east of the Mississippi River. However, as territories and eventual states to the west were added after the Mexican-American War, the geographical "Southwest" expanded, and the relationship of these new acquisitions to the South itself became "increasingly unclear. Since this article is about the Southwestern United States, the areas of Sonora and Chihuahua in Mexico will be excluded. The portion left includes Arizona and western New Mexico, the very southernmost part of Utah, southwestern Colorado, the very tip of west Texas, and triangle formed by the southern tip of Nevada. This will be the defined scope which is used in this article, unless otherwise specified in a particular area. The Southwestern Center for Herpetological Research defines the Southwest as being only the states of Arizona, New Mexico, with parts of California, Nevada, Texas, and Utah; although they include all of those six states in their map of the region, solely for ease of defining the border. This is an area containing the basic elements of Southern history, culture, politics, religion, and linguistic and settlement patterns, yet blended with traits of the frontier West. While this particular Southwest is notably different in many ways from the classic "Old South" or Southeast, these features are strong enough to give it a separate southwestern identity quite different in nature from that of the interior southwestern states to the west. One of these distinguishing characteristics in Texas is that Indigenous and Spanish American culture never played a central role in the development of this area in relative comparison to the others, as the vast majority of settlers were Anglo and blacks from the South. The majority of members of these tribes also allied themselves with the Confederacy during the Civil War. Combined with that, once the territory was open for settlement, southeastern pioneers made up a disproportionate number of these newcomers. All this contributed to the new state having a character that differed from other parts of the Southwest with large American Indian populations. Although cacti is thought to only grow in Arizona and New Mexico, many native cacti grow throughout Nevada, Utah, Colorado, and west Texas. Steppe is also located all over the high plains areas in Colorado, New Mexico, and Texas. The mountains of the southwestern states have large tracts of alpine trees. The High Plains in Eastern New Mexico, but also located in Eastern Colorado and West Texas Landscape features of the core southwestern areas include mountains, canyons, mesas, buttes, high broad basins, plateaus, desert lands, and some plains, characteristic of the Basin and Range Province. The entire southwestern region features semi-arid to arid terrain. The far eastern part of southwestern Texas, for example the Texas Hill Country, consists of dry, tall, and rugged rocky hills of limestone and granite. South Texas and the Rio Grande Valley is mostly flat with many places consisting of scrub and bare topsoil, much like the deserts further west. Wildlife[edit] The region has an extremely diverse bird population, with hundreds of species being found in the American Southwest. In the Chiricahua Mountains alone, in southeastern Arizona, there can be found more than species. Species include Canadian *Branta canadensis* and snow geese, sandhill cranes *Grus canadensis*, and the roadrunner, the most famous bird in the region, is found in all states of the Southwest.

Chapter 5 : North American Deserts

Great Desserts American West Endings Ebook Free Download Pdf added by Charles Takura on October 18 This is a copy of Great Desserts American West Endings that you could be downloaded this with no cost on calendrierdelascience.com

Wink, who is also a fly-fishing guide in Montana, picks his 10 favorite books set in the American West. When I think of the literature of the American West one hallmark of the genre, as I see it, is the way characters are forced to deal with a powerful, often hostile, landscape. In many cases this basic struggle is what drives the narrative or allows the characters to fully realize themselves. It seems like a simple thingâ€”human response to environment. However, the particular realities of this environmentâ€”existing as it does, often largely separate from the trappings of humanityâ€”is at the very core of what separates a Western from a New York novel. I would argue that in the majority of all good writing about the West there is something elementalâ€”the narrative of survival most basic. There is an equalizing factor at play here. The realities of a harsh environment put human suffering and triumph in perspectiveâ€”a small point plotted on the infinitely larger map of the land. I sometimes consider it this way: The characters in a Western are fairly regular forced to acknowledge the real scale of the world and their place in the cosmos, and I find that refreshing. Here are 10 good ones. In fact, I have read it at least once a year for the past ten or so and it is still as unrelentingly grim and powerful as the first time I picked it up. Comparisons to Moby-Dick are common and, I think, justified. *Winter in the Blood* by James Welch - A slim, beautifully poetic novel about a Native American man grappling both with the harsh realities of reservation life and the weight of his ancestral legacy. With pitch perfect sentences Harrison weaves a tale of revenge, war, and love set against the backdrop of Montana at the turn of the century. *Desert Solitaire* by Edward Abbey - I could have compiled another completely separate list of non-fiction books concerning the West, but that is a separate project. *The Son* follows a family from the early s to nearly the present day. All the major themes are present, the brutality of the frontier days serving as a foundation for the boom-time oil economy. Large in scope, the novel also manages to retain a sharp enough focus on the individuals that make up what we consider to be history. These characters subvert our expectations and give us a new way to look at place, even one as saturated with myth as the American West. Funny, poignant, and incredibly smart. In this early collection he turns his straight delivery and clear-eyed observations on the hardscrabble parts of Wyoming and Montana. I of course love Frank Bascombe as much as anyone but rereading this book makes me wish Ford would focus his authorial attention west of the Mississippi more often. *Housekeeping* by Marilynne Robinson - A near-perfect novel. *Close Range* by Annie Proulx - The stories in *Close Range* capture the raw emptiness of Wyoming, a state with far more pronghorn than people. The characters in *Close Range* are cowboys, bar fighters, ranchers shrewdly imagined and closely observed. The now classic "Brokeback Mountain" alone is worth the price of admission here.

Chapter 6 : Digital History

- *History American West* "The Great American Desert" The Great American Desert was the name given, in the first half of the nineteenth century, to the area west of the Mississippi river.

Travel Montana Soils and climate The soil groups of the Great Plains are correlated with rainfall and natural grass cover. In the more humid region with taller, heavier grass cover, deep, black soils mollisols with much organic matter developed. Sections with less moisture have lighter, shallower soils with less organic matter, while in the most arid regions the soils are even thinner, lighter in colour, and less organic in composition. Most of the soils have an accumulation of carbonates in their lower horizons, translocated there by infiltrating water. Advancing from east to west across the Great Plains, the climate gets progressively drier and, hence, the depth of carbonates decreases. The Great Plains have a continental climate. Over much of their expanse, cold winters and warm summers prevail, with low precipitation and humidity, much wind, and sudden changes in temperature. The major source of moisture is the Gulf of Mexico, and the amount falls off both to the north and west. Thus, the southern plains have 15 to 25 inches to mm of rain annually, the northern plains 12 to 15 inches, the eastern margin in Nebraska 25 inches, and the western margin in Montana less than 15 inches. More rainfall occurs in summer than in winter, except in some of the northwestern parts of the Great Plains. The southern parts of the Canadian Great Plains receive 10 to 20 inches and have a growing season of 70 to days. The growing season averages days in Texas and days at the U. Plant and animal life Natural vegetation in the Great Plains is dominated by grasses—tallgrass and medium grass prairie in the east and shortgrass and bunchgrass steppes in the west. These grasslands include forbs and larger plants such as the yucca and the prickly pear cactus in marginal areas, as well as shrubs and some small trees such as the mesquite and the sagebrush. Much of the natural grass cover, however, has been removed to create agricultural land or is heavily overgrazed, allowing for an increase in less-palatable species such as the cactus. Gallery riparian forests are found along the rivers and include hardy xerophytic drought-tolerant trees such as box elder and cottonwood. Coniferous evergreens primarily Ponderosa pine dominate the mountain islands, such as the Black Hills. Brian Kell Before European settlement, the Great Plains were the home of immense herds of grazing mammals: The buffalo were nearly eliminated, but the pronghorn continued to thrive. Other grassland-adapted animals that thrive together with agriculture include prairie dogs, coyotes, prairie chickens, and rattlesnakes. In the northern coniferous forests are found moose, woodland caribou, Canada lynx, and gray wolves timber wolves. The region is not without its share of insect pests, such as the locust and the tiny chigger. The people and economy The Great Plains were sparsely populated until about Spanish colonists from Mexico had begun occupying the southern plains in the 16th century and had brought with them horses and cattle. The introduction of the horse subsequently gave rise to a flourishing Plains Indian culture. In the mid-19th century, settlers from the eastern United States began to supplant the Indians, the latter being relegated to marginal agricultural areas set aside as reservations. European immigrants also played an important role in settling the plains; by 1890, foreign-born immigrants and their children constituted nearly half the population of the six northern plains states Montana, North Dakota, South Dakota, Wyoming, Nebraska, and Kansas, with the British, Germans many of them from Russia, and Scandinavians the leading ethnic groups. Buffalo Hunt, Chase, painting by George Catlin, Many of the immigrants were religious, thrifty, hardworking people who developed a strong attachment to the land. Kinship and nationality ties drew the plainsmen together, and they would travel long distances to visit and exchange work. Class differentiation was less and the status ladder shorter than in Europe or parts of North America that had been settled longer. Although there are still few large cities, some three-fifths of the population is urban. The rural population has remained sparse. Not generally a gregarious kind of people, they were highly individualistic in politics. Farmers, more inclined to social interaction, made economic cooperatives strong on the plains. Since the end of World War II, ranchers and farmers alike have valued horsemanship and rodeos as symbols of a tradition and style of life that evolved from the natural habitat. This exodus has been demoralizing for the farmers, ranchers, and businessmen who remained, and it has made survival more difficult for churches, schools, and the rural trading centres. The low

density of population has concentrated services increasingly in a few centres, necessitating long trips to attend school and church, to do business, and to recreate. To meet these difficulties, some farmers have moved into town to live and commuted back to their land to work, a revival of a centuries-old pattern. Indians on horseback exploited the buffalo herds for some two and a half centuries; but in the s cattle replaced the buffalo, and cowboys replaced the Indians. Settlement came in years of good rains, so the Great Plains were overpopulated in the first rush. A heavy emigration followed the twin blows of drought and economic depression in the s. Many grain farmers left because their farms were too small and more vulnerable to drought than the cattle ranches. Those who stayed built up the size of their holdings, saved against hard times, and added livestock to grain farming. These people were aided considerably by the construction after World War II of numerous dams in the Missouri River basin, which provided flood control, hydroelectric power , and irrigation. In addition, an immense source of groundwater, the Ogallala Aquifer , was tapped for irrigation water for an area extending from Nebraska to the Texas Panhandle. Additionally, the region has become a favoured place for cattle feedlots, where range-fed cattle are fattened for market on range-grown corn. Library of Congress, Washington, D. Thus, the Great Plains have remained basically an agricultural area producing wheat, cotton, corn maize , sorghum, and hay and raising cattle and sheep. Eight of the leading U. Of increasing importance are crops of such oilseeds as sunflower and canola. Livestock accounts for a large percentage of farm income in most of the plains states. Harvesting wheat on a farm in the grain belt near Saskatoon, Saskatchewan, Canada. A potash mine appears in the distant background. George Hunter The Great Plains states also produce much mineral wealth, with Texas leading the nation in mineral production and four other plains states Oklahoma, New Mexico, Wyoming, and Kansas ranking high. Four of the plains states have the largest coal reserves in the nation Wyoming, North Dakota, Montana, and Colorado but, except for Wyoming, rank low in actual production. Texas leads the United States in production of petroleum and natural gas , and several other plains states are substantial producers. Alberta leads Canada in petroleum and natural gas and has huge reserves of tar sands. American interest in the region was sparked by the Louisiana Purchase , which gave rise to the great Lewis and Clark Expedition in 1791. Two subsequent expeditions are of note: C Study of the Great Plains in the 20th century concentrated on their agricultural and mineral potential, as well as on their natural history. Since World War II more emphasis has been placed on ecological studies of the soils, groundwater, and effects of the use of agricultural chemicals.

Chapter 7 : | Travel + Leisure

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By the 19th century, the term had begun to take on its modern meaning. It was long thought that treeless lands were not good for agriculture ; thus the term "desert" also had the connotation of "unfit for farming". While the High Plains are not a desert in the modern sense, in this older sense of the word they were. The region is mostly semi-arid grassland and steppe. Today much of the region supports agriculture through the use of aquifer water irrigation. When the region was obtained by the United States as part of the Louisiana Purchase in 1803, President Jefferson wrote of the "immense and trackless deserts" of the region. Zebulon Pike wrote "these vast plains of the western hemisphere, may become in time equally celebrated as the sandy deserts of Africa". His map included a comment in the region, "not a stick of timber". I do not hesitate in giving the opinion, that it is almost wholly unfit for cultivation, and of course, uninhabitable by a people depending upon agriculture for their subsistence. Although tracts of fertile land considerably extensive are occasionally to be met with, yet the scarcity of wood and water, almost uniformly prevalent, will prove an insuperable obstacle in the way of settling the country. By the 19th century, the word had begun to assume its modern sense, evoking images of sandy wastelands. The giant herds and teeming wildlife of the Great Plains were well known by the time the term Great American Desert came into common use, undermining the idea of a wasteland; however, the relevant concept inherent in the reports of the region was that it could not be farmed, something the reports generally agreed on. By the middle of the 19th century, as settlers migrated across the plains to Oregon and California , the wasteland connotation of "desert" was seen to be false, but the sense of the region as uninhabitable remained until irrigation , railroad transportation, and barbed wire made up for the lack of surface water and wood. Settlers heading westward often attempted to pass through the region as quickly as possible en route to what was considered to be better land farther west. These early settlers gave telling names to the various streams of the region, such as "Sweetwater Creek" or "Poison Creek". Because it was not considered desirable, the area became one of the last strongholds of independent American Indians. Railroad interests seeking rights-of-way through the region also benefited from the popular belief that the land was commercially valueless. By the mid century, people had begun settling in the region despite its poor reputation. Experts of the era proposed theories that maintained the earlier reports had been accurate and the climate had changed. Some even credited the settlers themselves as having caused the change by planting crops and trees. The slogan " rain follows the plow " was created to describe this belief. Today these theories are discredited. Additionally, it has been demonstrated that while there is an abundant amount of fossil water in the Ogallala Aquifer, it is slow to replenish itself, with most of the water in the Aquifer having been there since the last Ice Age. Some current estimates predict the usefulness of the Aquifer for agriculture to subside and be useless as soon as the early parts of the mid century, leading current farmers to turn away from irrigated agriculture using the aquifer.

The "Great American Desert" was the term used by the people east of the Mississippi River to express their idea of the country westward when it was an unknown land. Carey and Lee's Atlas of located the Great American Desert as an indefinite territory in what is now Colorado, Kansas, Nebraska, Indian Territory and Texas.

In arid regions, average annual precipitation ranges from near zero to mm per year, and potential evapotranspiration PET ranges from to mm per year. In regions with arid climates most of the water gained from precipitation is quickly lost thru evaporation. An important difference between warm and cool deserts is that deep drainage rarely occurs on vegetated sites in the warm deserts, whereas it is common in the cold deserts. This helps explain the finding that deeper-rooted desert perennials may not utilize summer rains because they do not result in long-term soil moisture storage. As one descends in elevation in desert regions, rainfall not only decreases, but variability in rainfall increases. In extremely wet seasons, significant amounts of rainfall can be lost via run-off in the arid deserts, resulting in a lower percentage of the total moisture stored in the soil. Dry seasons tend to be longer, and true climatic droughts failure of predictable seasonal rains become more prevalent as the climate becomes more arid. The 4 deserts of North America can be demarcated by climate. Great Basin is a distinctly cold desert, with monthly mean temperatures below zero from Dec thru Feb, and a mean annual temp of 9 C 48 F. This contrasts with a mean annual temperature of 20 C 68 F for the 3 warm deserts. Annual frost free season ranges from days in Great Basin Sonoran Deserts , respectively. Cool temperatures during growing season are the second most important climatic factor after water availability influencing plant distribution and activity patterns in the cold deserts. Chihuahuan desert has a shorter frost free season than either Sonoran or Mojave, and mean temperatures that are intermediate between cold and other warm deserts. The Chihuahuan â€”Sonoran boundary corresponds to an increase in elevation and a corresponding steep gradient in temperature towards the Chihuahuan , which limits the extension of subtropical taxa into that desert. Northwestern deserts Mojave and Great Basin are characterized by winter-spring precipitation, and the southern deserts of Mexico are characterized by summer precipitation. The northern Sonoran receives predictable rainfall in both summer and winter. Diurnal fluctuations are greater in summer than in winter. Cold air inversions â€” because colder air is heavier than warm air, it flows downslope during the night and settles in the bottoms of the basins with a layer of warm air on top. The basin floor may be C colder than the bajada. Inversions are more important below 1,m and are more intense during the winter. During the day it is highest in the early morning, lowest in late afternoon, and increases again in the evening. Winds â€” the winds of spring and winter are generally stronger than those of summer. Evapotranspiration â€” Combination of high temperatures, low humidity, and wind produces high evaporation rates from moist surfaces and affects the rate of transpiration in plants. High percentages of sand and coarse fragments, 2. Low organic matter, 3. Minimal soil horizon differentiation, 4. Concentrations of carbonates, 5. Sand and coarse fragments are found on bajadas alluvium fans , plains and river washes. Soils with high percentages of silt and clay are found on playas. Soils with well-developed desert pavement covered with desert varnish may be found on alluvial fans. Desert soils with organic matter concentrations are found mostly in localized areas under shrub canopies or at higher elevations with greater amounts of precipitation and vegetation. Soil under shrub canopies may also have higher concentration of essential nutrients N and moisture than intershrub soil fertile islands. Geomorphology and Soils 1. Bajadas, desert pavement, arroyos coarse-textured, incised channels that carry flash floods down the slopes and bajadas during heavy rainfall. Dune fields are areas where Aeolian materials accumulate over extended periods of time. Dry lakes and playas occur at bottoms of internal drainage basins. They accumulate run-on water in the wet season, leaving behind the fine-textured sediments and salts washed down from the surrounding bajadas. Soil aeration is also low here, and it is believed that many species are unable to colonize playas because of low soil oxygen rather than salt salinity. Desert soils are immature with weakly developed profiles; a. Slope to playa coarse-grained soils to progressively finer-grained material , texture is important because coarse-grained soils have higher water infiltration rates, but lower water holding capacity. Propensity for shallow-rooted perennials dominate loamy bajadas less air spaces , whereas

deeper-rooted trees and shrubs dominate coarse-textured washes and upper bajadas. In arid climates, perennial vegetation reaches its highest cover and biomass on coarse-textured sands and gravels. In semiarid climates, fine-textured loams exhibit the highest plant cover and biomass due to greater soil moisture storage capacity after heavy rains. Next to moisture availability, salinity may be the most important factor that affects the distribution of plants in desert regions. Accumulation of salts in fine-textured basin soils causes surface crusts after rainfall and subsequent evaporation events. Can form salt hardpans in some areas. High salt content causes water and ionic stress in glycophytic plants c. Salt inhibits nitrification while increasing ammonia volatilization. Desert soils tend to be deficient in micro- and macro-nutrients. Due, in part, to slow decomposition rates, low soil moisture content, and soil alkalinity. Soil nutrient content varies by topographic position: For much of the year plants are either absent, leafless, dormant, or functioning at a low level over the course of a year the fraction of solar radiation trapped in photosynthesis is very low. Net productivity, then, as a function of area is generally low.

Chapter 9 : The Great American Desert –“ Legends of America

The term Great American Desert was used in the 19th century to describe the western part of the Great Plains east of the Rocky Mountains in North America to about the 100th meridian.