THE GREAT PLAINS: SPRINGS, SPAS, AND OTHER BUBBLING WATERS

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Incredible, you say! This fellow tells us he is going to talk about water and watery places on the Great Plains of North America. Doesn't he know that there is not a lot of water out there? That is why there are relatively few trees and darned few forests. Doesn't he know that these Great Plains were called "The Great American Desert" by the first crossers of the plains? Why does he think they called it that? That certainly does not sound much like a region with enough watery places to make it worth talking about, does it?

Let's take a crack at talking about the water on the plains, anyway. There was a time when I, too, would have shied away from the subject, when I would have felt it wasn't worthy of my time. That was before I was a dweller on the plains. Before I had begun to poke into the nooks and crannies of the plains. Before I had begun to leave the Interstates and travel via the lesser roads. Before I had become somewhat conversant with the history, the geography, the folklore, the nature of the plains. Before I had become to understand and, indeed, love this magnificent region of middle America we call The Great Plains.

I was driving and Merle was thumbing through the encyclopedic books she always carries when we travel. She zeroes in on the region we are going to be traversing and reads to me about the sights we should see, the places we should stop, the routes we should travel, etc. Often she asks me questions. Sometimes she hopes her questions will stump me. That is because she thinks I am a bit arrogant about my knowledge of geography and natural history.

This time, she asked me: Which of the following states has the most square miles of water within its boundaries: South Dakota, Nebraska, Iowa, Kansas, Colorado, Illinois, or Oklahoma? I did not know. Most of them were rather nonwatery states, I thought. Certainly, it could not be any of the plains states, so I guessed it would be Illinois. "Got you on that one," she gleefully retorted, "It's Nebraska!"

Who would have thought Nebraska, right in the middle of the Great Plains, would have more square miles of water than Illinois, Iowa, or Colorado? But it does. And there are other interesting surprises about water and watery places on the plains. Come with me and we will explore some of them.

THE SPRINGS OF THE PLAINS

As we have said, this region called The Great Plains was known as "The Great American Desert" in the early days of westward migration. The region was a vast, generally treeless, dry area which had to be crossed if one were to get to California or Santa Fe or Oregon. As with any desert, water was of paramount importance wherever and whenever it could be found.

Trails followed rivers and streams where it was possible for them to do so. Campsites were beside water whenever possible. In time, forts, trading posts, stores, and, ultimately, communities developed where water was available. We seldom used the term "oasis" to apply to the watering places on the Great Plains, but that was exactly what they were. Our oases were generally called simply a "watering hole" or, in some cases, a "spring." Or it might be just called a "camp." And when it got the important enough or when someone settled there it was given a special name.

Springs were definitely the most desirable sources of water. The plains rivers and streams were unreliable. They were generally slow, warm, and sometimes muddy. Occasionally, they were

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raging torrents, cold and still full of mud but, when this happened, water was not a problem for the plains-crosser anymore; he had more than he could handle.

Most springs, on the other hand, were clear, cool, and constant. The only problem was that there weren't enough of them scattered over the plains. In fact, they were quite rare. And in a few cases, a spring was so salty or mineral-laden that it was of no value. Bathing, yes; drinking or cooking, no.

Certainly, there were a few more spring-like watering holes in the early days than there are today. Some of them ran out of water as soon as numbers of people began to use them, others were so far from the travel routes that they never became really known. Some of them were of such poor quality that they never were used except under the most dire emergencies. There were never very many, however, and some indication of their scarcity can be garnered by tabulating the locations which carry the word "spring" or "springs" in their names today. I've done this. Let me share it with you.

There is not a single place on the North Dakota map today which carries "springs" or "spring" in its name. South Dakota has three: Hot Springs, Valley Springs, and Wessington Springs. There are two Rock Springs and Sand Springs in all of the plains portion of Montana. And that is at least the eastern half of that huge state. There are a few more springs further west in the mountains. Not only are they not on the plains, however, but many of them are hot springs.

I can find three such locations on the Nebraska map: Big Springs, Blue Springs, and Hay Springs. The plains portion of Oklahoma has five such places: Cleo Springs, Cold Springs, Erin Springs, Sand Springs, and Rush Springs. I did not work terribly hard on Texas because it is difficult to tell where the plains are and where they aren't, but a scan of the map turns up very few such names.

I have saved Kansas for last because I know a bit more about it and its springs. Alcove Springs and Cave Springs both existed once, I am told, but are no longer found on maps. Alcove Springs was near Maryville on the Oregon Trail. I have not been able to find out where Cave Springs was located. Wagon Bed Springs once existed along the Santa Fe Trail; it was in the general area of Garden City. There was a Crystal Springs post office until recently, but the Harper post office now serves that community. I read an article about a Big Springs which said that it was along the Oregon Trail in eastern Kansas just west of Gardner. That does not make sense to me for two reasons. First, the Oregon Trail would not have come that far south. Second, the list of recently closed post offices shows that Lecompton is now the post office for mail which formerly went to Big Springs.

I can locate eight places on present-day Kansas maps with "springs" in their names. In addition, I am aware of a ninth location, the Rock Springs 4-H Camp, on US 77 just south of I-70, which, though not a village or town, does appear on some maps. And there is an active spring there, too.

Sharon Springs and Russell Springs are towns well out on the western high plains almost to Colorado along old Highway 40. The Butterfield Trail Museum is in Russell Springs, which should tell us something about its history. Geuda Springs and Conway Springs are both in the Wellington Lowland south of Wichita. Baxter Springs is in the southeastern corner of Kansas and Bonner Springs is just west of Kansas City. Neither of these two are really out on the plains, however. They are much more Ozarkian and, of course, the Ozarks are just full of magnificent springs.

Diamond Springs and Lost Springs are still on the maps, but there is little to them as towns today. They are still springs, however. Both are near the Santa Fe Trail. Diamond Springs is about 15 miles southwest of Council Grove, which, for many years, was the jumping-off place for the trip across the plains proper. As such, it was about the right distance for some wagon trains for the first camp. Lost Springs is another 11-12 miles west and, hence, a second night stop for many travelers.

In all of the Great Plains, then, there are some 20-25 springs of sufficient consequence so that the term "springs" has been preserved in a location name today. That is not very many! But, of course, that is one of the reasons it was called "The Great American Desert."

There are more place names than that which have to do with water other than springs. But even these are not extensive when compared to other regions. In the Dakotas, for example, one finds Artesian, Bridgewater, Cherry Creek, Dell...
Rapids, Twin Brooks, Watertown, Whiteriver, Donnybrook, Forest River, Grand Forks, Great Bend, and Park River. The Montana plains have a Whitewater, a Musselshell, a Cat Creek, and three or four other places with "creek" in the name. There is a Chugwater out on the plains about 40 miles north of Cheyenne, Wyoming. Its claim to fame is that there is an old Atlas Missile silo nearby which is now owned by private citizens who use it for a home and a shop. Nebraska has Cedar Creek, Clearwater, Weeping Water, Wood River, and another 10 places with similar names.

Kansas has Great Bend, Neosho Rapids, Neosho Falls, Waterville, Whitewater, and 13 other such places. Until recently, it had three other post offices with similar names — including Shallow Water out on the high plains near Scott City but all three are now closed. Oklahoma has a Glenpool, and Stillwater, Goodwater, and Pond Creek.

All together, I can count some 60 towns and places on the plains which have water, falls, rapids, creek, or some other water-denoting term in the name. Again, that does not seem to be very many scattered over this large area, does it?

Then, too, we cannot be certain that these place names which sound as if they have something to do with water really do. For example, I would be willing to wager that the Donnybrook in North Dakota does not really describe a brook at that location at all. I would guess that it was named by a Scotsman who wanted to commemorate the Scottish place by that same name. Such is the case with Coldwater, Kansas. One would think that there was a nice, cool-water spring or well here in these otherwise high, dry plains. I did, until a friend who lives there told me it wasn't so. When the railroad came through, the conductor on the first train was instructed to give the station a name. Since he came from Coldwater, Michigan, that was the name he gave the station and the town which, later, developed around it.

There are uncountable numbers of places named Lake this and Lake that or turn it around and get Round Lake, Green Lake, and so forth in Minnesota, Wisconsin, Michigan, and points east and south. Minnesota, alone, is called the "Land of 10,000 Lakes" and with good reason! It is full of them! No such thing happens on the plains! There are four communities in North Dakota where "Lake" is a part of the name, nine in South Dakota, none in the plains half of Montana, one in Nebraska, two in Kansas, and one in the plains region of Oklahoma.

Springs and other water places, it is clear, did not have great impact on the naming of places on the plains. That, of course, is because there just were not too many of them out here.

THE SPAS OF THE PLAINS

The word "spa" came into our language from Belgium. It is the name of a celebrated Belgian watering place and soon came to be the name given to any mineral spring. Then, it evolved a bit further to where, today, according to my dictionary, it means "anyplace, especially a resort, having a mineral spring."

Mineral springs and hot springs have always attracted people to them because of their purported healing and medicinal properties. Whether they actually heal can be argued, but there can be little argument that it feels good to lounge about in their warm waters. People with aches and pains, if they could afford it or if the spring were nearby so that it did not cost a great deal to get there and to stay there have always liked to "take the waters." And taking the waters meant both bathing in them and drinking them. Some such waters were reputed to be good for almost anything that ailed one.

Fine hotels with good food, recreational facilities, and other such accoutrements developed around some mineral springs and, hence, they came to be known as "spas." The Romans were very fond of warm mineral baths. They were not the first to take advantage of natural springs and to convert them to bathing and recreational places, but they were probably the first to make such bathing an integral part of their culture. So much so, in fact, that they took the custom with them on their forays to other parts of the world as they forged the Roman Empire. Consequently, they exported their custom throughout their sphere of influence.

Bath, England, for example, is one of the truly famous Roman spas. The present-day city of Bath is one of the most visited places in the British Isles; one can still see there the remnants of the Roman
occupation of 2,000 years ago. From the name, it is obvious that much of these remnants have to do with the extensive bathing facilities the Romans built at the spot. They built them there, of course, because the waters were there. It is all, indeed, grand, and Bath is a striking example of a spa.

Mineral water springs and spas exist pretty much all over the world. Do they exist, also, on the Great Plains? Perhaps the question would be better phrased as "Did they exist on the Great Plains?" That is because there were more spas and spa-like places on the plains 50-100 years ago than there are today.

Bob Clarke, the editor of The Naturalist, after reading this first draft, told me about a place called Sycamore Springs. It was an extremely popular spa many years ago and exists today as a private resort catering to trailers and mobile homes. It has no bath, but the spring sill runs. The hotel has been put back into working order and accepts guests. There is a large swimming pool, a skating rink, a church, etc. on the grounds. It is about five miles north and a mile east of Sabetha, Kansas, perhaps not really out on the plains, but close.

Hot Springs, South Dakota, is right out on the plains. It is in the southwest corner of the state, almost in Nebraska, and just south of the Black Hills. It has one of the biggest indoor pools one can imagine. Just concrete walls with a gravel bottom in a big, shed-like building into which the warm water bubbles continuously. We had a marvelous time there when the kids were just about the right age for such, 12 or 13 or so. Enjoyed it immensely, but I can't really think of it as a spa. Yet it seems to be the only location on the plains which comes even close to being a spa today. Such was not always the case.

An acquaintance once took me to a place back in the hills of northeast Kansas where he showed me the site of a former hotel with a big pool. Little was left except remnants of the pool and the hotel foundation when I saw it, but it might have been something of a spa at one time. My guide said it was reputed to have been.

Then, there is Mineral Wells, Texas. The name of the town and the presence of a huge, yellow-brick, fine-looking, but now idle, 17-story hotel there would lead one to think this must have been a spa not too long ago. Mineral Wells, in my mind, is not really quite in the Great Plains, but it is close enough so that we can mention it.

Lost Springs, Kansas, was never really a spa even though it had several hotels and more than 20 restaurants in the late 1920s. Its oil boom, not its bubbling waters, were responsible for its second brief claim to fame. Its first claim, of course, was because of its importance as a Santa Fe Trail stop. Such was not the case with Kansas locations Chingawasa Springs, Geuda Springs, and Waconda Springs, however. They were once real spas.

In the late 1880s, Chingawasa Springs, near Marion, Kansas, had a fine summer hotel, medical attention, a dedicated staff to wait on its guests, and a special railroad to bring the guests to its reputedly curative mineral waters. Waconda Springs, some 16 feet under the waters of Waconda Lake near Cawker City today, attracted revelers and bathers to its resort complex for some 90 years until inundated by the new lake in 1964. It had been known as the Great Spirit Spring by the Indians for long before that. Detailed historical accounts of Chingawasa Springs and Waconda Springs may be found in Heritage of the Great Plains (Vol. 17, No. 3, Summer 1985)).

They are well worth the reading.

Geuda Springs still exists today, but not as much of a town and, certainly not as anything of a spa. In 1882, however, so many people came regularly that not all could be accommodated even though hotels and rooming houses were available. There was a posh "Mockingbird Lodge" hotel-sanitarium which was treating 400 patients a day in the salty, mineral waters. There was a gun club, a bathhouse, and a dance pavilion. It was all gone by the early 1920s. Today Geuda Springs is little more than a grain elevator, a cafe, a post office, and a cluster of houses about 10 miles west of Arkansas City and Winfield.

Today, the spa-seeking plains people go to Colorado Springs at the foot of Pike's Peak in Colorado. Or they go to White Sulphur Springs, Bezman Hot Springs, or Chico Hot Springs on the eastern slopes of the Rockies in Montana. Those in the eastern part of the Great plains may go to Excelsior Springs just outside of Kansas City in Missouri; when we first went there to take the baths in the 1960s, fellow guests were wheat farmers, ranchers, and business people from the Dakotas, Nebraska, and Kansas.

Or they might go to Eureka Springs in northern Arkansas, or Hot Springs in central Arkansas. They might even go as far away as Hot Springs,
Virginia, Warm Springs, Georgia, or White Sulphur Springs in West Virginia. Today they will have to leave the plains to take their baths, to spend time at a spa.

OTHER BUBBLING WATERS ON THE PLAINS

The Great Plains stopped being "The Great American Desert" when it was found that there was water under it in most places. A hole had to be drilled to get at it, but it was there.

In a few places, once the hole was drilled, the water would bubble out of its own accord. These were artesian wells. The water was forced up and out by underground pressure. Of course, this was great when it happened. One did not even need a windmill, much less a pump. Unfortunately, areas where artesian wells were found were not widespread. One of the best such area was in the Dakota sandstone geological structure of northcentral Kansas and southcentral Nebraska.

The artesian wells of the Dakota sandstone produced plenty of good, pure water for farmers, their families, and their livestock. When they wanted to expand their herds and, sometimes, water their crops, however, there was not always enough water. So they began to put pumps on the artesian wells. This pulled up more water. More and bigger pumps pulled up even more water for more animals and more crops. The tragedy of this exploitation has been that, without the water in it to hold it up, the underground Dakota sandstone structure collapsed. When that happened, it could never again be recharged with water. A renewable, continuous resource had been turned into a nonrenewable resource and depleted.

The lesson we failed to learn with the artesian wells of the Dakota sandstone is that we can do the same thing with other water resources, with those in other geological structures. We can exploit them so extensively with our need and our greed that we can render them obsolete. That is happening all over the high plains — the western portions of the Great Plains at this very moment.

Since artesian wells occurred in very few places on the plains, some other means of getting the water to the surface had to be used in most places. That, of course, was the windmill. But windmills did not always lift enough water fast enough to suit everyone. The greedier one was, the less satisfied one would be with the windmill. So, pumps run by gasoline, electricity, or natural gas were developed and put in place of the windmills.

Even this would not have been too bad if the amount of water taken was just enough for human and domestic animal use. Such was not to be, however. A new technology, irrigation, developed about the end of World War II about the last half of the 1940s. Actually, irrigation was a very old agricultural practice, but it had been done without heavy-duty pumps and in keeping with the natural system in all respects. Now, irrigation meant that crops such as corn and alfalfa and soybeans could be grown where before only wheat and dry-land farming was the practice. And more cattle could be fed faster with alfalfa and corn whereas, previously, they had been fed only the natural grasses of the plains. It was a whole new mode of agriculture. And it made the economy boom on the high plains! But it was terribly exploitive.

It was exploitive because it required a lot of water. To get the water, more wells with bigger and faster pumps on them were necessary. It was doubly exploitive because it took lots of energy to run the pumps; windmills had not required anything except the wind to run them. One might even say that it was triply exploitive because it also required fertilizer, pesticide, and other chemicals in quantity. But that is another story for another time.

Well, we have come near full cycle with the bubbling waters under the plains. Many of the artesian wells are gone. Others no longer bubble of their own accord; they have to be pumped like ordinary wells. The ordinary wells are being pumped drier and drier and water tables are falling methodically. The good news of the past few years has been that the water tables of the Texas and Oklahoma panhandles and of western Kansas, that area served by the Ogallala Aquifer, though still falling, have not been falling as fast as in the previous few years. Now, that is really good news, isn't it?
UP THE CREEK TO SOCIALIZE

We usually think of "a community" as being a village or a town, more-or-less square or circular in shape, and with houses and yards around a central "downtown" or park or courthouse square or center of some type. That is the usual case on the plains just as it is any place else. But there are also some very long, skinny communities out here. Before becoming acquainted with the Great Plains, I had no idea there were communities 10 miles long and only one road wide. But there are and it makes good sense, too. They are not incorporated, they are not official, they are not on the maps, but they do exist as working social communities. Diamond Creek Road in Chase County, Kansas, is a good example, but we could have selected from a myriad of others.

The Diamond Creek Road starts at US 50 and follows Diamond Creek as it proceeds to its source at Diamond Springs, some dozen miles to the north. Hymer and Diamond Springs are both still on the maps, but neither really exists today as a community. Rather, the entire road is the community. Weddings, funerals, illnesses, picnics, celebrations, social gatherings involve and include everyone along the road. The road is the community. And why not? Think about it a moment.

The trails which later became the roads often followed the creeks and draws out here on the plains. The people settled along the roads. It just makes good sense.

The next community to the west of Diamond Creek Road will be along Middle Creek Road. There is a wedding up there next week. See you then.

THE RIVERS OF THE PLAINS

I would wager that 95% of the U.S. citizens who live east of Kansas City or west of Denver cannot name two rivers found on the Great Plains. Many of these citizens will be able to name the Missouri, although I am not at all confident that many easterners or westerners have any real idea where even that big river flows, but they won't be able to come up with a second one.

I would go one step further. I daresay that 50% of the inhabitants of the Great Plains cannot name a river near which they live plus one other. The other may or may not be the Missouri; I have the idea that not too many of the inhabitants of the southern part of the Great Plains know what rivers are found in the northern portions of this vast area. We plains people are just not river-thinking people!

Think, for a moment, about the questions my challenges pose. Are there rivers on the Great Plains? After all, the plains were called "The Great American Desert" for some reason; if there were rivers 150 years ago, how did the area get that name? If there are rivers, where are they? How well known are they? What directions do they flow? How do they compare with the other drainage systems of North America? Of the world? What influence did they have on the settlement of the plains? What influence do they have today?

These are the types of questions I ask myself as I tramp around these plains for which I have come to hold a great fondness. They are the types of questions I think all of us who live on the plains ought to ponder. Then, we would be in a better position to give answers to those who only pass through. We would be better able to extoll the virtues of the plains.

Even though the rivers of the Great Plains are not household words nationally, they were of tremendous importance in the history of the area. And they are of even greater importance to the modern Great Plains. With the exception of the most northern part of the plains up in Canada where some of the drainage begins to go to the north, all the drainage systems tend to flow from the west to the east with a strong southerly movement. Of course, they are all going to end in the Mississippi River and the Gulf of Mexico eventually.

The Missouri arises in the Rockies in western Montana. It swallows the Yellowstone, which comes out of the Rockies a bit further south, at the North Dakota state line. Between the two of them, they make the plains of Montana somewhat habitable, and most of Montana is Great Plains even though it has truly magnificent mountains on its western extremity. The Missouri then meanders right down the middle of both the Dakotas, gathering its tributaries as it hauls melting snow and periodic cloudbursts out of that part of the plains. Much has been written, sung, and spoken.
about the Missouri. It was the route of Lewis and Clark and, therefore, one of the first highways across the plains.

Kansas is drained by two appreciable river systems, neither of which most of the rest of the world seems to know much about. The Kansas, or Kaw, as it is often called, is one of them. This business of calling the Kansas River by two names is, in itself, somewhat indicative of the little knowledge most of us have about the plains rivers, it seems to me. It is even deceptive to the non-plains person. I spent some time, for example, trying to discover both the Kansas and the Kaw when only one existed.

The Kansas really does not get started at all until its tributaries: the Big Blue, the Little Blue, the Republican, the North Solomon, the South Solomon, the Saline, and the Smoky Hill all come together around Manhattan. Consequently, it only exists for about 150 miles until it empties itself into the Missouri at Kansas City and is no more. I've found that almost nobody knows anything about the Kaw unless they live somewhere in one of its valleys. Yet, it is exceedingly important to the region and, indeed, is quite an impressive stream of water when one crosses it at Manhattan, Topeka, Lawrence, or Kansas City. And even more so when it floods!

The other river system of great importance to the Kansas plains is certainly not impressive no matter where one crosses it. It is the Arkansas River. I have always prided myself on knowing a good deal of geography — and I am positive that I have always been much better equipped with such information that most of the population — but I never even recognized the existence of this river until I came to live in Kansas. And I did not come to really appreciate its importance to the plains until I began to travel the Ark River territory and make my own observations. No one ever tells you much about it. Nevertheless, this portion of the plains would be bleak, indeed, without this river system to water it and to drain it. The Ark is important enough and interesting enough that it deserves an entire story of its own.

I must mention one other Kansas river system, the Neosho. I must do this for two reasons. First, it is important in that it drains the east-central region of Kansas. Second, Emporia sits at the confluence of the Cottonwood, the other major component of the Neosho system, and the Neosho itself. Emporia gets its water from the Neosho. It sometimes get small flood problems from one or both of the Cottonwood and the Neosho. How well we remember that our first Saturday night in Emporia was spent down at the K-99 bridge with dozens of other Emporians watching the Cottonwood flood. What sort of an Emporian would I be, what sort of a "viewer from Emporia, if I did not include the Neosho River system in my view of "The River of the Plains?"

Moving on south, one finds the Cimarron and the Canadian draining Oklahoma. The Cimarron arises in Colorado and loops up into Kansas twice before settling down into Oklahoma, but it is a plains river all the way. The Canadian, likewise, from its origin in New Mexico and the Texas panhandle, is definitely a plains river. Further east, they both join the Arkansas and contribute to its journey to the Gulf of Mexico.

The Red River, which separates Oklahoma and Texas, carries its water from the plains all the way across Louisiana before dumping it into the Mississippi. Much of its western portion makes it, indeed, a plains river. It is difficult, however, to identify other Texas rivers as being truly plains rivers, partly because the Great Plains become narrow and difficult to identify down in Texas and partly because there are few rivers of consequence there anyway. The Brazos, the Colorado, and the Pecos just about cover the situation. All three originate in the high plains or west Texas and, hence, carry plains water, when there is enough to carry, away from these dry, southern plains, that is even though they traverse non-plains territory over most of their route.

If you have been truly alert as I named the major drainage systems crossing the Great Plains, starting in the north and moving south, you will know that I skipped one. I jumped right over the Platte without even mentioning its name. Of course, that can not be! Why would I do such a thing? I did it because I wanted to give the Platte special attention! Like the Arkansas River, the Platte is both important enough and little enough known to deserve such.
THE PLATTE IS REALLY FAR FROM FLAT

Next to the Missouri River, the Platte was without question, the most important highway across the plains for the early travelers who dared venture out onto the Great American Desert. One properly thinks of the “start” of a river as being its headwaters, of that portion of the system where brooks, streams, and creeks arise in the higher elevations before anastomosing to form the tributaries which ultimately fuse to make the river. Of course, that is the correct way to view it. On the other hand, one sometimes gets a better perspective of the river and its contributing components if one starts at the mouth and travels upstream. The Platte lends itself to the latter approach.

This is particularly true if one’s perspective starts from Emporia as, obviously, mine does. That is because the Platte flows into the Missouri about 200 miles almost due north of Emporia. It does that at Plattsmouth, Nebraska, a small community just south of Omaha. Consequently, we can readily drive north from Emporia and begin our exploration of the Platte River by following it to its headwaters in the west.

Generally, the way to really explore an area is to get onto the side roads. I shall continue to believe this is true 90% of the time. The big highways, however, are useful the other 10%. Such is the case with an exploration of the Platte. Interstate 80 follows its valley for much of the river’s trek across Nebraska.

Interstate 80 does not enter the Platte Valley immediately, however. It has to come from Omaha, whereas the river is south a few miles. Then, the Interstate has the task of connecting Lincoln with the rest of the world before going straight west to Grand Island where, as the name indicates, it is in the valley.

No matter that Interstate 80 does not actually follow the river between Grand Island and the Missouri at Plattsmouth. There is nothing particularly interesting or exciting in that stretch anyway. It is a different story from Grand Island west. Not only is I-80 the best way to get the feel for this part of the plains and to examine the influence of the river, but it is reasonably pleasant to drive the big highway through here. The rest stops are frequent and good. There are free maps and other information at many of them and even sculpture at some of them. But, most important, we can see how the Platte makes this otherwise increasingly inhospitable land very livable, indeed!

It is difficult for us to envision how lush, how prosperous the Platte River Valley is if we have not driven through it and made our own observations. Except for the eastern edge of Nebraska, most of the cities and towns and, hence, much of the population outside of Omaha and Lincoln, lie in this valley. The river and its water make agriculture possible. That, in turn, makes it possible for the cities and towns to be there.

The valley grows corn, alfalfa, sugar beets and, of course, cattle. Plumes of stark white smoke from alfalfa-dehydrating plants and the accompanying acrid smell are common in the valley during much of the growing season. Not all the alfalfa is dehydrated. Much of it, along with other hay crops, is stacked. These stacks are everywhere and look like rows of big loaves of bread. Some of them look like whole-wheat bread, some like loaves of light rye, and some of them like big, green loaves prepared for St. Patrick’s Day. Their age and state of drying, of course, account for the variations in color.

Cottonwood trees are everywhere in the Platte Valley. They are of all sizes, from huge trees six feet in diameter and 80 feet in height down to scruffy saplings in big groves. Sometimes, where the fields have been cleared right to the water, they are far away from the river and almost out of the valley. In other places, they go right down to the river proper.

Irrigation is prominent and one can readily study and understand the system in this valley. Corn is generally irrigated early in the year and alfalfa late, with the goal of getting an extra crop off of each field whenever possible. Unlike some of the irrigation out on the high plains, this irrigation in the Platte Valley makes a great deal of sense for two reasons. First, much of it is a natural gravity system so that it is not costly in terms of energy requirements for pumping. Second, this gravity system tends to take water from the river upstream, direct it to where it can be used and, ultimately return some of it back to the river downstream. Irrigation in the Platte River Valley tends to fit the natural order.

We have little feeling of traveling through the plains on much of this journey. We are doing so,
of course, and in fact, continually moving into the high plains as one proceeds west. The highway tends to stay in the valley, however; hence, we do not get the feel of the plains much of the time.

Past Gothenburg — can’t you just see all those Swedes through here naming that town after the city in Sweden of the same name. There are Platte’s on both sides. The main river has separated into its north and south components and the highway runs right between them. We do not feel that influence of the plains here at all; the only feeling is that of the river and of the rich agricultural land. Between North Platte and Ogallala, the valley becomes exceedingly broad as the two rivers diverge. The plains are so far away that they have little impact on the viewer. Here and there, however, we can see the hills of the high plains in the distance either to the south or to the north and, occasionally, on both sides at the same time.

As the two Plattes get further and further apart, they form a wider and wider plain between them. Further to the west, this flat plain gets so wide that it extends as far as one can see. For example, at one point, I could see a big power plant in the distance and clocked the mileage to it. It was 15 miles from the point where I first spotted it to the plant itself.

A bit further down the road, this central plain between the Plattes becomes so wide that the high plains hills begin to come in between the rivers. At this point, we know that we are no longer dealing with two branches of the Platte. It is quite clear that there are now two distinct rivers going their own separate ways. The fact that the North Platte and the South Platte come together to form the Platte seems to be purely incidental.

What has happened, then, when the two Plattes separate is that they stay close together for some miles; the land between them is low, wet, full of cottonwoods, and of no agricultural consequence. As they move further apart, a broad, agricultural plain is formed between them. Even further west, the hills of the high plains encroach on the flat plain. There is little farming here; this is grazing country. One can see this entire transition in a relatively few miles of this part of the Platte Valley.

In order to build Interstate 80 through this valley of relatively low land and high water table, it was necessary to get much sand and gravel to raise the roadbed in many places. There is plenty of sand and gravel in the valley, but, to get it, the roadbuilders had to take it from pits along the roadway. The result is that much of I-80 is lined with magnificent little rectangular lakes; perhaps you would prefer to call them ponds. The water in them looks good, fishermen are prominent on their banks, and both private and public recreational areas for picnicking, swimming, and camping abound beside them. What it amounts to is a marvelous water recreational system of some 200-300 miles along the highway. If you do not see it for yourself, you will have difficulty believing me when I tell you it is there in the middle of Nebraska. Even more unlikely, you may not believe that this string of tiny lakes runs across this much of the Great Plains. I did not originally.

One other thing about the Platte Valley across Nebraska. This is a minor item, I suppose, but one of great interest to me. There are about as many bee hives scattered through here as I have found anywhere. Would you think that there are bee hives all across Nebraska? They are here in the valley, of course, because of the alfalfa. Bees are great alfalfa pollinators. The more bees, the better the alfalfa.

The two Plattes really split at Ogallala. The North Platte goes to Scott’s Bluff and on into the mountains of Wyoming where it originates west and south of Casper. We must leave I-80 to follow it. Interstate 80 follows neither Platte; it bisects the plains between them and goes to Cheyenne, Laramie, and the mountains along the bottom of Wyoming.

Interstate 76 leaves I-80 near Julesburg, Colorado, and follows the South Platte in a southwesterly direction toward Denver. I would not dare say another word about this country. It has been magnificently covered by James Michener in his book, *Centennial*. He has described everything: the geology, the history, the agriculture and irrigation, the culture, and the peoples (and “peoples” is purposely in the plural because many people of many backgrounds were involved in settling this country). It is a great book! Read it if you want the flavor of the high plains and, particularly, if you want to understand the importance of a river such as the South Platte to a portion of the Great Plains.

Since I would not dare attempt to add anything to what Michener has so beautifully written about...
the South Platte country, let me take you up the North Platte. As I said, you begin to follow the North Platte at Ogallala. About here, one takes US 26 to the northwest and Scott's Bluff.

First, you must leave the valley and move up into the high plains. They are stupendous here, particularly so because they contrast with the agricultural valley through which you have been driving for the past several hours. This is wheat country! And since much of it is dry-land wheat country it decorates the landscape in strips of wheat fields alternating with fallow land. Marvelous geometry! There is some irrigation; it becomes quite apparent when one drives beside the big McConaghy Reservoir for several miles.

Soon, one finds sculptured rocks rising above the plains to the south. There is one called "courthouse and jail," another is "castle rock," other lesser outcroppings are given various, less imposing names. Looming in the west is the most impressive of them all, Scott's Bluff itself.

Scott's Bluff is a national monument. As is the case with all national monuments, it is well worth a visit of a couple of hours. That is so for any of us at any time, but it is particularly true if one has children along. Here is history! And history with which young people can equate and which they can understand. I shall never forget watching our 11-year-old and 12-year-old inspect the wagon wheel ruts of the Oregon Trail here at Scott's Bluff. I can still see them looking back to the east and contemplating the high plains across which they, imagining themselves in an early wagon train, had just come. And of peering into the sun over the even higher plains to the west and wondering what their wagons would have to face there before encountering the mountains ahead of them in Wyoming. This is the way one not only sees history, but, indeed, feels it.

We cross the North Platte several times as we move northwest up its valley. We see it from both sides and from above. It is never very impressive, as is the case with most of the rivers on the plains, but we cannot help but be impressed by its importance to the plains. There are many of them before the coming of agriculture with its draining of such places.

And it is such all the way from Scott's Bluff on up to Torrington, Wyoming.

Above Torrington, we come into the high plains again. There is no irrigation here. This is dry-land farming with the alternating strips of wheat and fallow fields covering the landscape. There is even a town here named Wheatland. That name ought to describe this country for us, I think.

It soon becomes truly and completely high plains terrain too rough and soil too shallow for cultivation — with mountains beginning to creep onto the horizon. We know we are still on the plains, but it is clear that the plains are about to give way to the mountains.

It is difficult to follow the North Platte as it comes down from its beginning in Wyoming. The roads no longer follow it closely; it does not go where roads can be built readily. We cross it near Casper, still an appreciable stream, and, later, we may cross it again on I-80 well south of Casper. Here it is a piddling creek of such insignificance that it can be easily overlooked. But that is the way rivers start, whether plains rivers or rivers in some other part of the world, isn't it?

The Platte, like all of the rivers of the Great Plains, is not terribly impressive as rivers go. Such rivers are exceedingly important to the plains and the people of the plains, however. Without them, there would not be many of us out here. Look at them closely the next time you have an opportunity. Drive up the Platte Valley or down if you are going east. And give some thought to these rivers of the Great Plains. They deserve our attention.

THE SWAMPS (SWAMPS?) OF THE PLAINS

Swamps in The Great American Desert? Surely, I jest. Perhaps "swamps" is not quite the correct term, but I do not jest. Certainly, one finds nothing on the Great Plains to compare with Okefenokee Swamp, the Great Dismal Swamp, the Everglades of Florida, the bayous of Louisiana, or the great swamps and muskegs of the far north. Perhaps the terms "marshes, bogs, basins, wetlands, lowland, etc." would better describe these types of watery areas on the plains. But, indeed, there are marshy, grassy, standing water areas on the Great Plains, whatever they be called. Perhaps there were even more of them before the coming of agriculture with its draining of such places.
Marshy areas may be found somewhere along most any stream or river, even on the plains; sometimes they are rather vast. This is particularly true where two rivers join. The area between the North Platte and the South Platte, remember, is a marsh of a good many miles in length. Much of the space between the Neosho River and the Cottonwood River here near Emporia where they join is low and marshy.

The great curve of the Arkansas River, which gives Great Bend, Kansas, its name, has a number of marshy spots within it. Some of them are salt marshes. One of them is a big Quivira National Wildlife Refuge. This big bend in the river also contains the converse of the swamp in that rather extensive sand dunes are found there, and, indeed, the fact of the matter is that the entire Arkansas frequently is little more than a marsh; that is the way it is in times of low rainfall.

There are three big regions of Kansas which carry the name "lowlands." These are the Cherokee Lowlands, the Wellington Lowlands, and the McPherson Lowlands. Obviously, they were so named because of their general wet, marshy nature. One can still see this very clearly when driving through the Cherokee Lowlands in the southeast corner of the state. Pecan trees, willows, and cottonwoods abound; grassy marshes are prominent. The wet characteristic is a bit harder to see in the Wellington Lowlands just southwest of Wichita and in the McPherson Lowlands north of Wichita because so much of these areas is now lush agricultural land. That means, of course, that there has been much draining and changing of the terrain.

One other type of location where one finds the swamps of the plains is in the backwaters of the big, man-made lakes and reservoirs which dot the plains. The big dams which make these lakes possible cause the impounded water to back way up and to form marshy areas. It is easy to see such in many places. For example, I-35 goes right through a considerable amount of such swampy area just north of El Dorado; it is, of course, the backwater of the big, new El Dorado Lake.

Then, too, there are some very special "swamps" on the plains. Florence Lake in North Dakota is such a place. Though carrying the name "lake," it would appear to be a big, grassy marsh to most of us. White Woman Basin, just south of Scott City in western Kansas, is another, if only because of its name.

In Oklahoma, one may find The Great Salt Plains. This is a stark, white beach of considerable width and some four-to-five miles in length along the western edge of a shallow, marshy lake. This is part of a prehistoric sea which is slowly dying and drying and, hence, leaving behind minerals as it does so. This area is well worth a look, though most plains people do not even know it is there. It is on the map and is easy to find. One drives south on US 81 to Medford, Oklahoma, about 30 miles south of the Kansas line, and then leaves US 81 to drift west for some 20 miles.

The gem of all swamps on the plains is probably Cheyenne Bottoms. Located just north of Great Bend, right in the middle of Kansas, it is a huge, basin-like sink some 41,000 acres (64 square miles) in size. The Bottoms is a most interesting place to visit: a complex of streams, sand dunes, alluvial deposits, grassy marshes, open water, and scads of birds and wildlife. It is on a major flyway for migrating ducks, geese, and other birds. An entire Kansas School Naturalist (Vol. 32, No. 2, December 1985) has been devoted to Cheyenne Bottoms. It was written by Marvin Schwilling, an agent of the Kansas Fish and Game Commission who was Manager of the Cheyenne Bottoms Wildlife Management Area for 14 years.

Whether Cheyenne Bottoms, Florence Lake, the various Lowlands, the backwaters of the big reservoirs, and other such places are truly swamps is not important. They are, indeed, watery places on the Great Plains. As such, they contribute to keeping this vast land from being The Great American Desert. Therefore, they deserve a modicum of our attention. And of our affection.

THE LAKES OF THE PLAINS

The lakes of the plains are mainly man-made. The fact of the matter is that they are essentially all man-made. A further fact of the matter is that they are really reservoirs, places where water is collected and stored. But who is to say that they should not be called lakes?

These plains lakes may logically be put into one of four categories. The biggest, generally, are those where a major river has been dammed to hold a large volume of water behind it. These, of course, have all been built by some governmental agency; they are governmentally-controlled.
A second group, also of bodies of water of considerable size, are those in which a dam, usually earthen, has been built so as to impound water from a drainage system. The dam backs up the natural water in a central valley and its tributary creeks and gullies. An irregularly-shaped reservoir of considerable size and with miles of shore line is thus formed. Most of these big reservoirs were built — and are controlled by the Army Corps of Engineers. The main consideration was flood control, but water conservation and recreation, also, are of much importance.

A third category of plains lakes, though similar to the big Corps of Engineers reservoirs in consisting of an earthen dam across a drainage system, are those which are smaller and under the control of smaller governmental units. Most of the counties in the eastern two-thirds of Kansas have such a lake. Many of them were built by the WPA or PWA or CCC during the depression years. They now serve as water supplies, flood-control systems, and recreational facilities. They are marvelous resource additions to the plains.

Some lakes of this type have been built by municipalities as water-supply sources. Emporia's Lake Kahola, for example, was built in the late 1930s, following the dust bowl days, on a tributary system of the Neosho River. In time of need, water from Lake Kahola can be released into the Neosho which, then, carries it down to Emporia some 20 miles away. Lake Kahola is controlled by the Emporia city government in all its recreational and water supply respects.

The fourth type of plains lakes are those which are often called "farm ponds." These are privately built and controlled. They consist, simply, of an earthen dam across a draw or gully which will collect and hold the water running down the gully. These small lakes dot the plains. Every farm or ranch of any size has one or more. So do many of the homes on the plains. Other small lakes came into being when soil and gravel was needed to build the big highways across the plains. Diggings these materials left depressions which, then, filled with water. This is the case with the lovely little lakes all along I-80 near the Platte River.

It is possible there should be a fifth category of these bodies of water on the Great Plains. That would be of those which are true lakes. The map shows a number of what appear to be such in the eastern portions of North and South Dakota. Minnesota, the Land of 10,000 Lakes, of course, is just next door.

The biggest of these Great Plains lakes, those of the first type, are dammed portions of the Missouri River: Ft. Peck Lake in eastern Montana; the huge Lake Sakakawea formed behind Garrison Dam and Lake Oahe in North Dakota; the southern extension of Lake Oahe, Lake Sharpe, Lake Francis Case, and Lewis and Clark Lake in South Dakota. Lake McConaghy, in Nebraska, is formed by a dam on the North Platte. The John Martin Reservoir, just east of Las Animas, Colorado, is on the Arkansas River.

These latter two are much smaller than those on the Missouri.

Though not comparable in individual size, the Army Corps of Engineers lakes, those of the second category, are far more numerous across the plains. There are 23 of them in Kansas alone. Some of them are scattered across the other plains states, also. Oklahoma has scads of them, but the majority are in the eastern half of the state and, hence, not really out on the Great Plains.

It is impossible to count the numbers of smaller lakes and reservoirs in the other categories. A perusal of the maps readily shows one that they are numerous, however. And, of course, most of the farm pond-types, and those formed along the big highways do not appear on the maps at all; there must be literally thousands and thousands of them scattered across the plains.

So it may, initially, sound nonsensical, naive, and just plain wrong to speak of "the lakes of the plains." When one totes it all up, however, there is a considerable number of bodies of water scattered over the area. Not only are they instrumental in making the Great Plains something other than The Great American Desert, but they, also, give some of us considerable aesthetic pleasure.

Standing on one of the huge earthen dams and looking up some eight-to-ten miles of water where none existed a quarter-century ago is a spectacular pleasure. If, in addition, we take in the stark beauty of these generally treeless shores merging out onto the plains, we, indeed, have an awe-inspiring sight before us. I have been known to drive fifty miles out of the way just to spend a few minutes standing on a dam while oohing and ahhing over this majesty of the lakes on the plains. I hope that I shall always continue to do exactly that.
THE FUTURE: THE GREAT AMERICAN DESERT AGAIN?

Another decade or two will probably do it. There will not be enough water for both irrigation on the plains and for man and his animals. The irrigation will have to go. If it is not stopped soon enough, there may not be enough water in the western parts of the Great Plains to even maintain man, to say nothing of his animals. If that should happen, the cycle will be complete and we will be back, again, to The Great American Desert. That would be a considerable shame.

Since we seem incapable of learning lessons from experiences like the Dakota sandstone and its, once, bubbling waters, I suspect that such will, unfortunately, happen and that much of the plains will become an uninhabitable desert in the not-too-distant future. Such has happened before in our world. The bad management and greed of man has created deserts before.

Too bad! The springs, the spas, and the other bubbling waters were never in great profusion on the Great Plains. But they were sufficiently plentiful to have sustained a reasonable population of humans in a quality fashion. Greed and misuse, however, may well make the early settlers correct when they thought the region to be The Great American Desert. "Don't stop here! Just move on through the desert to the better lands over the mountains." The traveler through much of the plains may, again, be saying that one day in the near future.