THE GREAT PLAINS
A VIEW FROM EMPORIA
By John E. Peterson

THE KANSAS SCHOOL NATURALIST

Vol. 34
No. 2
Emporia State University
Emporia, Kansas
December
1987
The Kansas School Naturalist

Published by

Emporia State University

Prepared and Issued by

The Division of Biological Sciences

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The Kansas School Naturalist is sent upon request, free of charge, to Kansas teachers, school board members and administrators, librarians, conservationists, youth leaders, and other adults interested in nature education. Back numbers are sent free as long as supply lasts. Send requests to The Kansas School Naturalist, Division of Biological Sciences, Emporia State University, Emporia, Kansas, 66801-5087.

The Kansas School Naturalist is published in October, December, February, and April of each year by Emporia State University, 1200 Commercial Street, Emporia, Kansas 66801-5087. Second-class postage paid at Emporia, Kansas.

"Statement required by the Act of August 12, 1970, Section 3685, Title 34, United States Code, showing Ownership, Management, and Circulation."

The Kansas School Naturalist is published in October, December, February, and April. Editorial Office and Publication Office at 1200 Commercial Street, Emporia, Kansas 66801-5087. The Naturalist is edited and published by Emporia State University, Emporia, Kansas. Editor, Robert F. Clarke, Division of Biological Sciences.
We were happily enjoying the Great Plains countryside. It was a beautiful fall day and we were cruising along a secondary highway on our way to Medicine Lodge. We were going to see the Treat Pageant we had read about; it was only presented every three years the account had said. We gradually overtook a Pennsylvania car and moved over to pass it. As we did so, we both exclaimed, "For heaven's sake. They are playing cards."

And, indeed, they were. While we were enjoying the scenery we had come to appreciate in the four years we had been Kansans, the Pennsylvania couple played cards so they would not have to watch the dullness of the Great Plains countryside.

Unfortunately, there are many who traverse this vast area known as The Great Plains without ever seeing anything but long stretches of dullness through which they must pass, without ever asking: What is this region through which we are passing all about? What are these Great Plains, anyway?

If one lives in one of the states in that tier bordering the west bank of the Mississippi River — as I lived in Missouri for many years — one has a tendency to think of the Great Plains as that expanse of relatively flat land one must drive through to get to the exciting Rocky Mountains in the west. Or one sees it as the same 600 miles of "nothingness" one must cross when leaving the mountains on the way home. Hot — often dusty — in summer. Cold and, perhaps, blizzardy in winter. Windy much of the time, the wind often associated with some of the most magnificent — and frightening, to this traveler from the east — thunder and lightning displays on the face of the earth.

This crosser of the plains usually plots the most direct, the most rapid course over them. Probably Interstate 70 through Kansas the first time or two. Then, looking for variety, he tries Interstate 80 through Nebraska, I-90 further to the north, or one of the other paths across the Dakotas. In desperation, as one makes more crossings, one drops south into Oklahoma and Texas — or one tries a few lesser routes running in easterly and westerly directions. After a bit, the traveler across the Great Plains gives up trying to find easier, more pleasant, more interesting
routes and succumbs to the myth that the area is, indeed, "The Great American Desert" described and labelled by the earliest white travelers into it. He ultimately comes to view the journey as a chore to be endured. Something to gripe about afterward to his less adventurous friends. Or something about which to commiserate with those who have also made the trip.

What an unfortunate turn-of-events. The Great Plains do not constitute a desert between the green cornfields and forests of the Mississippi River states and the purple mountains. Rather, the term denotes a vast region filled with an appreciable amount of the history of America, with both natural and man-made aesthetics of some splendor, with considerable manifestations of the wealth of the nation, with a myriad of interesting things just to see and do, with some of the most livable villages, towns, and cities in the world, and with people who do credit to the human race in any company. The distances are great; the population density is not! Hence, one generally must make some effort to locate the points of interest; one must be willing to spend some time and energy in getting acquainted with the area.

For many years, I was one of those travelers through the plains. For the past 10 years, however, I have been a denizen of these same plains. As such, I have become very much an explorer and appreciator of "The Great Plains." My center of operation has been Emporia, Kansas, and, hence, my view of the Great Plains has been "a view from Emporia." Note that I said "a view." One could get other views — most of them equally as good as mine — from other centers of operation. This happens to be mine and, indeed, I find it satisfactory. While not central, it is well located. While not perfect in all respects, it is a reasonable place in which to live, play, and work between explorations. My view of the Great Plains emanates from Emporia.

I believe that it is an advantage for me to have come to the plains rather recently. I get a perspective that many of the long-time residents don't have. I see things established viewers don't always see. I go places they don't visit. My view is different — not necessarily better, but different. In addition to being a view from Emporia and the view of a recent arrival to the plains, it is the view of a botanist, a naturalist, a trained observer. Consequently, it may help us all to see this magnificent grassland a bit more clearly. And it may help us define what the Great Plains are.

WHAT ARE THE GREAT PLAINS?

There are four great grassland areas in the world. These are the Steppes — largely Russian — of eastern Europe and Asia, the Pampas — mostly in Argentina — of South America, the Savannas of Africa, and the Prairie and Great Plains of central North America. There are smaller grassland areas in the world. The moors in southern England of which Dartmoor and Salisbury Plain are more specific parts, the Nullarbor Plain of southern Australia, and the Palouse region of Washington and Oregon are examples of such.

There are also subdivisions of the four big grasslands. The High Veldt of
South Africa and the Serengeti Plain of Kenya and Tanzania are subdivisions of the Savanna. Such areas as the High Plains, the Flint Hills, and the Tall Grass Prairie are subdivisions of the North American Great Plains. These Great Plains are not the largest of these four big grasslands — even though they are some 2,500 miles long and 1,000 miles wide at some points — but they certainly are the most highly developed and the most important of the four. Yet relatively little attention is focused on them as a region; they are often unappreciated and not understood, even by those who live in them. Perhaps this is partly because the Great Plains are not well defined; it is not easy to answer the question: What are the Great Plains?

Part of the difficulty with this question is that natural areas, such as grasslands, seldom follow man-made political boundaries. Plains, grasslands, prairies don't stop at state lines. Another difficulty is that people with different perspectives and areas of expertise view such regions differently. Although certainly related, the emphasis of the geologist is different from that of the botanist, the agriculturist, or the climatologist. It is not possible to give a precise answer to What are the Great Plains which will be completely satisfactory to everyone. It is possible, however, to say some things about the region which will help us all to delineate the region.

Most simply, the Great Plains may be described best as that tier of states composed of the Dakotas, Nebraska, Kansas, Oklahoma, and Texas. More specifically, the region generally is considered to run south of the Rio Grande River into the central deserts of Mexico a bit and well north into the Canadian provinces of Saskatchewan and Alberta. The plains merge into the prairie states on the east — Minnesota, Iowa, Missouri, Arkansas, and Manitoba in Canada — and into the mountain states of Montana, Wyoming, Colorado, and New Mexico on the west. One can be quite certain that one is no longer in "The Great Plains" when one reaches the Mississippi River on the east, the Rocky Mountains on the west, Mexico on the south, or the Canadian tundra on the north.

Whether a view from Emporia or elsewhere, is there a difference between "the plains" and "the prairies?" Where do the prairies end and the plains start? Or do they? When one examines technical treatises describing the great grasslands of the world, our own great North American grassland is usually called "the prairie." Where, then, does the term "the plains" come in? Should we be saying "The Great Prairies" instead of "The Great Plains?"

The above are reasonable, sharp questions, but they do not bring good, crisp answers. There is a strong tendency for most of us to use the terms "prairies" and "plains" interchangeably. Even the experts generally are not helpful in answering our questions. Sometimes, they disagree among themselves. More often, they are simply evasive because they really cannot tell us that we are seeing prairie on one side of the road and plains on the other. It just doesn't happen that way in nature. The Missouri-Kansas state line is a convenient political boundary, but it has nothing to do with where the prairie ends and the plains begin.
An expert will likely want to answer our questions with a rather long discourse on the subject broadly, a discourse which will include a number of illustrations and qualifications, and a discourse which will conclude with the statement that such-and-such an area is an example of a typical prairie while this area over here is typical of a certain type of plain. Although I do not fancy myself an expert, that is what I want to do. I want to discourse on the subject a bit. I want to talk about the questions I have raised — and about the ideas such questions bring to mind — without answering any of them with any precision.

Inhabitants of the Great Plains — sometimes living just down the road — use “plains” in place of “prairie” in every one of the instances above. And it really doesn’t make the least bit of difference which term is used, does it?

I have never heard anyone say “The Great Prairie,” have you? Yet, I expect that our forefathers might just as well have used that term as “The Great Plains” when they pushed into the west 150 years ago. They did, of course, use “The Great American Desert” to describe the area until they came to realize that that term was not descriptive of the situation. I expect they needed some term to describe the differences, which must have been very obvious to them, between the rich, black-soil grasslands of Indiana, Illinois, and Iowa and the drier, shallower-soil grasslands they found as they pushed further into Kansas, Nebraska, and the Dakotas. In other words, it was obvious that this was, at least, a different type of prairie. It probably was obvious, also, that the eastern prairies were just part of a bigger “plains” complex.

A lovely book entitled “The Tallgrass Prairie: The Inland Sea” appeared in the summer of 1978. Its author is Patricia Duncan, who now lives at Lake Quivira, Kansas, “near the western edge of the original tallgrass prairie,” as the jacket describes it. Without the least intention of arguing that description, I might also say that Mrs. Duncan lives on the eastern edge of the Great Plains. Either description, it seems to me, would be equally appropriate.

Mrs. Duncan defines the tallgrass prairie — very accurately, as far as I am concerned, as starting in Ohio, covering western Indiana, all of Illinois, and then expanding north and south to cover all of Iowa, northwestern Missouri, southwestern Minnesota, and the eastern 100 miles or so of Kansas, Nebraska, the Dakotas, and northward into Canada. It also is well represented in Oklahoma and Texas. Her book concentrates on this tallgrass prairie, but she also delineates a “midgrass prairie,” an area of some 100 miles in width running north from about Austin, Texas, right up the middle of Oklahoma, Kansas, Nebraska, the Dakotas, and on into Canada. She also refers to the “shortgrass prairie” which covers western Texas and then runs northward through Kansas and Colorado, Nebraska and Wyoming, the western Dakotas, and most of Montana before going well into Canada. This shortgrass prairie covers the area between the midgrass prairie and the Rockies, an area which many of us call the High Plains.

Now, I take no issue with Patricia Duncan’s description of this great prairie
area. In fact, I applaud it. It is clearly, accurately, and beautifully done as well in this handsome book. My point in speaking of it is this. If you look at the map on the inside cover of the book, these three prairies cover exactly that part of the United States and I would call the Great Plains. My map of the Great Plains looks exactly like Mrs. Duncan’s map of the American prairie!

While all of the cornbelt should be included as part of the prairie, much of it is clearly never thought of as the Great Plains. Illinois is generally not a plains state; certainly, it is very much cornbelt and, just as certainly, it is prairie. Missouri, though part prairie and cornbelt, is seldom thought of as Great Plains. Some of Iowa, however, is beginning to be plains while, clearly, also cornbelt and prairie. Anyone who has traveled through southeastern Minnesota has little trouble designating it as “plains,” but it, also, is clearly prairie and cornbelt. The matter is complicated even further by the growing of corn under irrigation in the high plains — western Kansas and eastern Colorado — places where corn was never found 25 years ago. And places where corn doesn’t really belong at all. So it goes with an attempt to sort out cornbelt and prairie as a part of the Great Plains.

There are other “prairie” areas scattered over North America. These are either in regions where prairies and plains are not expected or they are areas which don’t look like prairies today. Further, there are some regions which look like prairies today which really were never grasslands before man’s intervention. Permit me to give an illustration or two of these “extensions of the plains.”

There is a sizeable region in east-central Arkansas — near where the Arkansas River flows into the Mississippi — known as the Grand Prairie. Today, it is a flat, fertile agricultural land, with much rice being grown there. It doesn’t make one think of a prairie at all but it, also, is and that is when it got its name of Grand Prairie.

One can find rolling plains areas of some size in California and Washington. They were, at some point in time — and, in some cases, still are — grasslands which might well have been called prairies or plains. The Palouse region of Washington still looks to me very much like western Kansas or Nebraska — wheat, grazing lands, and all — and I would have no trouble calling it shortgrass prairie or high plains.

It is conceded by all that both the tallgrass prairies and short grass prairies run well into Canada, where they merge with the spruce-birch-hemlock boreal forest. Much of central Canada, then, is Great Plains, or prairie, and would be recognized as such by any of us. It will grow no corn because the season is too short, but it grows wheat, flax, and mustard very well. It is truly magnificent in July when the wheat is beginning to ripen, the flax is in brilliant blue flower, and the mustard fields are filled with bright golden flowers on dark green foliage.

Before man and his agriculture came to the Canadian plain, the grassland didn’t extend as far into the north as it does now. The open prairie, of course, was settled first and put under the plow. In time, however, the prairie was gone and the
homesteaders had to take land which had to be cleared before it could be planted to wheat and flax. The process is still going on today.

The clearing process today is mechanized. Hence, new prairie can be made much faster and easier. As a result, the Canadian prairie of today stretches much further north than it did when the Europeans first came. The Great Plains are still expanding to the north.

So, is it plains or is it prairie? I admitted at the outset that I couldn’t answer the question. I doubt if anyone can. Both terms certainly apply to the Great Plains. Just as certainly, some of the prairie — perhaps most of it, depending on how it is defined — is a part of the Great Plains. You make up your own mind what you will call your particular part of it.

The important thing is that you appreciate, enjoy, and understand these beautiful, productive grasslands of middle America. Look them over closely the next time you travel through them. Whether plains or prairies, they are well worth your acquaintance. And your friendship.

What are the Great Plains? The question is answered to my own satisfaction, but not necessarily to that of anyone else. The Great Plains are prairie, high plains, short grass, and tall grass. They are wheat, cattle, and oil. They are villages, charming towns, and bustling small cities. The Great Plains are space in which to flex one’s elbows, fresh breezes, blustery winds, searing heat, and piercing cold. They are history, art, music, trails to the gold fields and Santa Fe, and a melding of immigrants from many lands into a distinct mid-American culture. The Great Plains are waving seas of grass, expansive fields, wooded valleys, rolling hills, and skies so full of stars that some of them regularly fall out. The Great Plains are magnificence.

**THE HILLS OF THE PLAINS**

To some, the very idea of hills on plains is a contradiction. Plains, they will say, as we all know, are vast, flat, grassy, treeless areas. So, how can one speak of hills on the plains? One can do so, of course, because there are immense numbers of outcroppings — of hills — scattered over any plains region of any size. Certainly, this is true of the huge area known as the Great Plains of North America. Let me illustrate — or, perhaps, refresh your memory — by naming some of the special hill areas found on our particular plains.

The Black Hills of South Dakota are probably the most widely known. We all know that there are foothills on the western extremity of the plains as one approaches the mountains. There are the Flint Hills of eastern Kansas, the Sand Hills of western Nebraska, the Red Hills of south-central Kansas and north-central Oklahoma, the Chautauqua Hills on the Kansas-Oklahoma border in the eastern parts of both states, the Loess Hills along the Missouri River starting in the northeastern corner of Kansas and running along the eastern edge of Nebraska into South Dakota, the Smokey Hills in western Kansas, the Antelope Hills and Wichita Mountains of Oklahoma, both of which are really hill areas although the latter are
called mountains, the Osage Questas (more commonly just called the Osage Hills) of eastern Kansas, and so on. And on and on, if we had the time to name more and more of them. Many other hill areas have been given names.

The plains are not only broken by hilly areas with some frequency, but, indeed, there are innumerable smaller outcroppings of sufficient character to have been given special names. One can find a “Castle Rock” in almost every state in the Great Plains — and in nearly every other state as well. Rough, irregular, but beautiful areas called by some such names as “The Devil’s Playground,” “Hell’s Halfacre,” or “The Badlands” are scattered throughout the plains; the best known one, no doubt, is the Badlands National Monument in South Dakota. “Chimney Rock” formations are quite common.

There are as immense numbers of high places on the plains which have real and purported history attached to them. Pawnee Rock, on the old Santa Fe Trail in the middle of Kansas, is said to have served the Indians as a lookout for wagon trains coming across the plain. Scott’s Bluff, in western Nebraska on the Oregon Trail — where, by the way, one can still see the wagon wheel ruts very nicely, is a majestic, rugged outcropping in an area of many more such interruptions to the topography of the plain. Coronado’s Heights are promontories between Lindsborg and Salina, Kansas, which, so the story goes, Coronado and his party reached in their search for gold and climbed for a better view of the region to the north and east before turning back to the southwest and Mexico. Many communities on the plains have a local Lover’s Leap, Lookout Point, or something similar; most of them have some bit of local lore attached to the naming of the particular high point.

No matter how one slices them, the plains of middle America simply are not flat. The fact of the matter is that it is difficult to find really extensive flat areas which fit the usual stereotype. Much of the Great Plains of southern Canada fits this description rather nicely. Local, extensive flat areas can be found in present and geological river flood plains. Both the Canadian plain and the flood plain areas are now rich, heavily-cultivated regions and, hence, not always obvious as plains. The former was originally grassland while many of the latter areas were originally wooded and had to be cleared before they could be planted. In both cases, they tend to look like agricultural lands rather than “plains” to most observers today.

There are some other vast, flat areas which, interestingly enough, the casual observer also fails to see as “plains.” The Cherokee Lowland in southeastern Kansas is one such area, but the Wellington and McPherson Lowlands to the south, west, and north of Wichita are even better illustrations. These lowlands are fertile, productive regions; hence, they are heavily cultivated and, like river flood plains, no longer give one the impression of being a “plain.” Originally, however, they must have fit the stereotype most people have of what the plains look like much better than does the rolling, hilly landscape which comprises 90% of the Great Plains.

Indeed, then, the plains are not flat. They are almost always rolling-to-hilly, laced with rivers and other drainage cuts, some of which are quite rugged, and they
are interspersed with outcroppings and hilly regions sufficiently spectacular to deserve special names. Let me tell you a bit more about a couple of them.

Emporia is often said to be the capital of the Flint Hills. It isn't really; it isn't even in the Flint Hills. It does lie in the heart of the combined Flint Hills-Osage Hills regions and most of us cannot really tell when we leave one region and go into the other. Actually, the Flint Hills are just to the west of Emporia and run essentially north and south from the Oklahoma to the Nebraska state lines in a band about 70 miles wide. They are so named, not because they produced flint for arrowheads as is sometimes said, but because they are composed of chert, or flint limestone. This underlying structure is easily seen as one travels through them, since there is seldom more than two or three feet of soil on top of the limestone. This, of course, explains why they are treeless except in the drainage areas.

The shallow soil and treeless characteristic accounts for why the Flint Hills constitute one of the great grazing areas of the world. Lush stands of grass grow luxuriantly across these hills and support a fine cattle-raising agriculture. Generally, one has to leave the big highways crossing the plains in order to see the special areas which are a part of them. That is not the case with the Flint Hills. Interstate 35, between Emporia and El Dorado, cuts right through some of the most scenic and illustrative sections of these particular hills. Look hard at them the next time you make that trip. Some of us find this trip through the Flint Hills superb and are glad that we have to travel it frequently.

The Chautauqua Hills are at the west edge of the Osage Questas and they cut about 50 miles directly north from Oklahoma into Kansas. They are never more than about 20 miles wide in Kansas, but the observant traveler definitely knows when he is in them; they look and feel different from any of the surrounding terrain. They are different because they are wooded. And they are wooded because of thicker soil caps over a very thick sandstone underlay. A ridge of sandstone in all of the limestone makes a readily observable different set of hills. No major highway goes through the Chautauqua Hills so you'll have to go out of your way to see them. It's worth it. Particularly, if you still don't believe there are hills on the plains.

I could go on and on talking about these various hilly areas of the plains. The Black Hills are worthy of reams of words, but volumes have already been written, spoken, and pictured about them. I couldn't add anything that would do them justice from my vantage point in Emporia. Visit them, enjoy them, and observe them as a part of the Great Plains if you haven't done so. The Sand Hills of Nebraska, also, deserve much attention. They are breathtakingly grand and intriguing, in my opinion. But I don't know enough about them to do them justice either and, even if I did, I would have to compete with a magnificent illustrated article done by the National Geographic in one of its 1978 numbers. If you still don't believe there are areas of gorgeous hills on the plains, look up this article. Better yet, plan a trip that will take you through the Sand Hills on your way to the Black Hills — or vice versa.

I must call your attention to the Red Hills of Kansas and Oklahoma, however, before I close. I discovered these hills myself in the fall of 1978, although I had
I can't explain why it took us so long to get to them. They are, of course, off the beaten path — they are south of US 50 when one is traveling east or west through southern Kansas, they are north of any major east-west highway in Oklahoma, and they are well west of I-35 going north and south. So, one must make an effort to get to them. Another possible detractant to focusing attention on them is that they are called the Red Hills by some because they are composed of red sandstone and shale; they are called the Gypsum Hills by others because deposits of high grade white gypsum cap some of them (and, hence, makes for some commercial mining of gypsum in the region), and they are called just the Gyp Hills by others. I know it took me sometime to sort out that I was about the same set of hills when the various names were used.

I know it took me sometime to sort out that I was about the same set of hills when the various names were used. It is really no great problem to plan one's travel so that it will take one through the Red Hills. It is particularly worth doing when one in going east or west because in just a bit over a hundred miles one can see the typical high plains on the west, Coldwater, the Red Hills, and Medicine Lodge with its Carrie Nation and Indian tradition in the center, and the rich agricultural areas of the Wellington Lowland, a truly flat, open plain, on the east. The high plains, of course, are always spectacular, but so is this fertile lowland region. Sumner County, just south of Wichita, produces more wheat each year than any other county in Kansas — and, of course, Kansas takes a back seat to no one in the production of wheat. In addition, peaches, apples, alfalfa, soybeans, and a variety of other crops are produced in the region. The Wellington Lowland is truly one of the rich agricultural areas of the entire Great Plains and, as such, is well worth a visit. Try it sometime.

So, one has the high plains on the west and the Wellington Lowland on the east if one cuts across the bottom of Kansas on US 160. And in between, one has the Red Hills. This 20 miles of splendor is enough to bring one this way in its own right. The Red Hills are, as I have said, rugged outcroppings of rather bright red sandstone and various shales. Some of the outcroppings have whitish caps of gypsum on them. They come in all shapes: mesas, buttes, rounded hills, ragged hills, sculpted rocks chimneys, etc.; they even include a badlands. The soil is also quite red and, in the lower, flatter areas between the outcroppings, this red soil is planted with green crops. Quite spectacular! Particularly when the light is just right. Do go and see it for yourself.

My final comment on the hills of the plains is a reminder, again, that the Great Plains merge into the Rocky Mountains on the west. In order to do that, the foothills of the mountains and the high plains mix with one another. It is questionable where one stops and the other begins, so that, in many places, the foothills come way out onto the plains while, in other places, the plains go well into the mountains. But all of that is another story for another time. I would also remind you that, on the eastern flank, the Great Plains merge into the Ozarks (themselves really nothing but big hills) on the south, the rolling prairies of the cornbelt in the middle, and a glaciated, often rugged terrain of hills and lakes on the north. The plains are bounded on the west and on the east, then, by hills. Hills which never
really stop because of the plains.

The next time you cross Nebraska or Kansas and think you don't have anything to see while you pass through this vast, treeless plain, ask yourself how flat, how treeless, it really is. There is a great deal of it to cross and it is not done quickly, to be sure, but neither is it the flat, dull expanse the hurried, casual traveler thinks he sees while whizzing through on one of the big interstates. Closer observation will reward any traveler with interesting breaks in the topography. Going a few miles off a main thoroughfare in either direction will often bring even greater rewards by taking one right into various of the regions of hills on the plains.

THE STABILITY OF THE PLAINS

One Sunday morning, listening to the radio and lounging about, I heard reports on an earthquake in Yugoslavia, floods in the northern Mississippi valley, more floods in southern U.S. states, namely Jackson, Mississippi, a volcanic eruption on St. Vincent's Island in the Caribbean, and the cleanup of a devastating tornado through the Wichita Falls, Texas-Lawton, Oklahoma, area. An unusual amount of natural upheavals, it seemed. I remarked that, perhaps, Mother Nature was attempting to remind us who really runs things.

The news and commentary went on to speak of the aftermath of the Three-Mile Nuclear Power Plant crisis in Pennsylvania, the civil unrest in Uganda and Nicaragua, the religious and political revolution in Iran, and the finding of flesh-eating Pirhana fish in a small lake in Florida. These man-influenced deviations in the tranquility of parts of the world — on top of the natural instabilities identified above — got me to thinking about stability in general. And, since I tend to think about whatever I am thinking about in terms of where I live and love, it followed that I was soon thinking about the stability of the plains area. Is the Great Plains a reasonably stable part of the world? Or is it an area of regular turmoil due to natural phenomena or man-influenced interventions? Is it an area of relative tranquility? Or are the plains full of risk, adventure, and excitement? However it compares to other places in the world in stability, what difference does it make to the quality of life on the plains? Is it a plus or a minus?

I thought I might share some of my ideas on these matters with you — with your permission, of course. It's a short topic, as I see it, so it will take only a few minutes of your time. Our subject, then, is: What degree of stability does one find on the Great Plains?

There has been no volcanic activity anywhere on the plains in the few years of recorded history. Nor is there appreciable geological record of earlier volcanic activity on the plains proper. One can find the presence of volcanic cones and craters on the western edge of the plains, however.

Capulin National Monument, in the northeastern corner of New Mexico, for example, arises several hundred feet from the flat, high plains of that area in one of the most symmetrical extinct volcanic cones on the North American continent. Its
symmetry is the main reason why it has been designated a national monument. One can drive to the top of the cone in a series of breath-taking spirals around it and, then, walk down into the crater itself. Of course, it has been quiet now for several hundred years, it is all filled in, and even has vegetation growing in it. Capulin is exceedingly stable. As much so as the rest of the solid rock around it.

There is little likelihood that there will be any further volcanic activity on, or near, the plains in the foreseeable future. Such is just not part of the character of the plains.

Nor should one expect to find earthquake activity on the plains. It is always possible, of course, but the structural stability of the region is such that earthquakes are just not one of the things the plains-dweller need spend much time worrying about. There is a fault system about 100 miles wide running south from central Nebraska through Kansas and about half-way through Oklahoma. The system lies about 100 miles west of the eastern borders of these three plains states. It has greater potential for earth movement — and, hence, for earthquakes — than the surrounding plains and prairie regions, but it is hardly worth losing any sleep over. The plains geological structure is really quite solid and, hence, quite stable.

Floods have occurred on the plains in the past; there certainly will be some here and there in the future. They have generally been relatively local, however. Although it undoubtedly hurts an individual farmer who loses his entire crop — or his buildings or animals — to a flood as much as he can be hurt, the chances of widespread losses to flood on the plains are many times less than they are in other parts of the world.

The most destructive floods usually occur on the eastern edges of the plains themselves or just east of the plains proper — Sioux City, Kansas City, those regions where the waters draining from the plains accumulate before crossing Missouri and Arkansas on their way to the sea. In other words, excessive plains waters are more likely to contribute to the flooding of non-plains regions than they are to flood the plains. Then, too, the extensive building of dams and reservoirs on plains streams over the past 25-30 years has done much to reduce the probability of flooding on the plains.

This is not to imply that there are not floods on the plains. Indeed, there are, but they generally are not of the destructive magnitude found in many other places. Villages have been flooded repeatedly to the point where, ultimately, they have been abandoned. Perhaps there shouldn't have been villages in those places in the first place. And, sometimes, floods are expected with such regularity that plans are made for them. I know of a small bank in one of the river valley towns where the floor tiles are not glued down. When a flood is coming, the tiles can be picked up and stored until the waters go down and the floor has dried.

Other times, floods get so regular, and are so relatively harmless, that they get to be social events. We remember our first Saturday night in Emporia with a great deal of humor and affection. The Gazette was running stories indicating that the
Cottonwood River was expected to crest that very night at some 17-18 feet above flood stage. Knowing few people in town and, hence, having little to do with our Saturday evening, we took the opportunity to go down to Soden's Grove bridge to watch it happen. We were with several hundred other people, all, seemingly, in a quite festive mood. How many other people can say they spent their first Saturday night in a new town watching the local river flood? It happens on the plains.

The opposite of too much water — so little that droughts result — are apt to be unstable events of greater frequency and concern on the Great Plains. In fact, droughts and dry spells are of sufficiently regular occurrence here that they may almost be considered the stable situation. They certainly are expected, and any respectable plains — watcher knows droughts will occur with some regularity, how to cope with them when they do, and how to prepare for their coming. An entire system of agriculture — dry-land farming — developed many years ago and is quite sophisticated today in spite of the fact that irrigation has pushed it into the background in many places. This is only temporary, however. As the water for irrigation disappears, dry-land farming certainly will reappear in prominence.

The city of Emporia, as have other plains cities and towns, learned its lesson from the droughty, dust bowl 1930s in terms of thinking ahead for its water needs. It built a reservoir, Lake Kahola, 18 miles away on one of the tributaries of the Neosho River, the source of its water. When necessary, the gates can be opened and water from the lake can run into the river, which carries it downstream to the city waterworks. One of the oldtimers who was on the commission which planned Lake Kahola told me with great pride: "Emporia will never again suffer for lack of water the way we did in the 30s." I hope he is right.

When it really comes down to it, the meteorological characteristics of the plains are responsible for most of their instabilities. An acquaintance of mine, who had just come from the east to live on the plains, observed that central Kansas may have the greatest extremes in weather of any place on the face of the earth. I never thought about it before — and it may not be true — but he may, indeed, be right. His remark was made in January when the temperature the night before had fallen to 29° below zero Fahrenheit. At the time of his arrival in Kansas, not quite six months earlier in August, the temperature had gotten to 110° Fahrenheit. The latter was above zero, of course. That, indeed, is some range in temperature variation. One can hardly think of it as instability, however, because it happens many years in a goodly portion of the plains. Such variation is more apt to be the rule rather than the exception.

Another meteorological feature of the plains, of course, is the wind. Again, the presence of a wind on the plains can hardly be thought of as an instability. Rather, it is so regular that it is a stable characteristic. If one plays tennis, as I do, one simply learns to play with the wind — or one gives up the game. It's going to be there to influence one's game most of the time.

It rather amazes me that no special names have been given to the winds of the
plains. We all have heard of "The Trade Winds," "The Chinook Wind," the hot, dry "Santa Ana Winds" of Southern California, the "Taku Winds" of Alaska, and, of course, "The Wind They Call Mariah." Many of the other winds of the world have been named. Why have no names been given to the prominent, usually-present wind of the Great Plains? They are, indeed, prominent. Everyone talks about them — longtime plainsmen (and plainswomen, in particular), as well as newcomers and travelers just passing through. And they are most important because of the dust they push about, the blizzards they cause, and, most of all, for their role in tornados and cyclones.

Now, we have come to what is, without question, I would think, that most impressive instability of the Great Plains, the cyclone. Certainly, it is the phenomenon of greatest concern, the most feared instability, on the Great Plains. If we want to brag about our trials and tribulations, we may not have volcanoes and earthquakes to harass us, but we do have cyclones.

We can brag about these wind-driven instabilities with which we must contend, if we choose, and take a backseat to no one on the face of the earth. And they are instabilities. Our weather prognosticators are getting quite good at alerting us to the presence of the meteorological conditions which spawn cyclones, but they cannot tell us with any precision when or where such spawning shall touch the ground. The cyclone is, indeed, the prominent instability of the plains.

All-in-all, however, the Great Plains are a reasonably stable part of the world. Grasshoppers, green bugs, chinch bugs, or other insect plagues, come periodically. They may be trouble when they appear, but their coming is hardly a great surprise. One ought to expect them from time-to-time as a regular part of the plains personality.

Destructive hail storms, likewise, hit here and there every once in awhile. They are not everyday occurrences, but neither are they of such wide destructive force or such infrequent happening that they can be thought of as gross instabilities.

Even the politics and the economy of the plains are pretty stable. Coupled with drought and wind, the great depression of the 1930s gave much of the Great Plains its dust bowl image of song and story. But, in general, the economy has been — and is today — solid and stable.

I do not editorialize as to whether stability is good or bad, right or wrong. I simply observe that it — stability in darned near everything except the meteorological conditions which make for cyclones — is a characteristic of the Great Plains. What do you think? Is that true? Or false? Is it a plus? Or a minus? Or just the way it happens to be here on the plains?
NOTICE: As of press time, this will be the last issue of this volume. If financial assistance becomes available, numbers 3 and 4 (February and April) will be published; otherwise, this is it. Thank you for your continued patience and encouragement and support.