

A Survey of the Herpetofauna of the Big Sioux River Valley...2003

By Tom Jessen...Mankato, Minn.

From May 12 to October 10, 2003...I conducted a survey for Reptiles and Amphibians along the Big Sioux River Valley from Dell Rapids, South Dakota to Sioux City, Iowa. The main objective of the expedition was to document the location and population density of all Herpetofauna encountered. Also included are observations of birds and mammals, land forms and weather phenomena. This is a re-print of the daily field journal (with a few added photos) that was recorded during this time.

May 12: (Monday) Drove into the Big Sioux Rec. Area west of Brandon in the afternoon. Got a park sticker and the lady at the park headquarters says that she has seen a couple **Garter Snakes** and maybe one **Fox Snake** in the park so far that Spring. Hiked up to the hill west of the Big Sioux river...looked to the eastern horizon and saw a prairie fire at Blue Mound State Park...20 miles to the northeast. Rode my bike up and down the gravel road to the west thru the Indian Hills where I saw all the dead **Lined Snakes** last year but only saw 3 **Wild Turkeys**. At 7:00 I stopped at the hiway 42 bridge over the Big Sioux at East Sioux Falls...found one old dead **Fox Snake** on the road and found 5 more under the rocks in the ditch...2 hatchlings and 3 sub-adults. Also found about a dozen **Red Garters snakes** and 21 **Prairie Ring-Neck snakes** of all sizes!

May 13: (Tuesday) Discovered the newly opened Arrow Head Park at East Sioux Falls. (An abandoned Sioux Quartzite quarry on the western bluff of the Big Sioux River just up the hill from the hiway 42 bridge.) Saw 2 **Mute Swans** mating in the pond! Lots of flat rocks are all around the area and I found a total of 25 **Ringneck Snakes** (1 juvenile



inside a child's shoe!) and 2 tiny **Fox Snakes**



(under the rocks) and 1 large adult male **Fox Snake** crossing the trail. (air temp...65 degrees and sunny) Next...

drove down to the Lake Alvin Rec. Area. Picked up a **Spider** while in the toilet facility and it bit me in the stomach when I got back to the Van! Walked the area but found nothing. Drove to Gitche Manitou in Iowa and found 6 **Prairie Skinks** under the rocks at the parking area.

May 14: (Wed) Rainy Day.

May 15: (Thur) Cloudy. From Luverne, Minn...Drove a zig-zag route down the Rock River. Heard no Frogs of any kind! Drove south to 5-Ridge Prairie in the Loess Hills of Iowa. Stopped at the gate but didn't go in. Instead drove around the hills and saw a few **Painted Turtles** in the ponds along the roads. Found the Nature Conservancy area at the top of the hills. Nice Place. Saw Yucca plants! Drove west across the Big Sioux to Elk

Point, So. Dakota and then went north to Richland then east to the river. Saw 2 dead adult **Fox Snakes** on each side of the Big Sioux River and found a dead adult female **Fox Snake** at the beginning of the gravel river road east of Richland Followed the gravel road up the valley to Newton Hills State Park. Park Ranger guy sez: "We see lots of **Fox Snakes** and occasional **Bull Snake** here." Set up camp. Witnessed total eclipse of the Moon that night and heard **Chorus Frogs** calling down by Lake Lakota.

May 16: (Friday) Found 2 **Prairie Skinks** down at the culvert west of the lake and 2 more **Skinks** under a stump in the grasslands to the west. Drove east to Fairview and north west around the Inspiration Hills. Through Canton and east thru the Big Sioux River Wildlife area (Nelson tract) and then up thru the prairie bluffs of Iowa where I met a couple out walking down a gravel road. I asked them if they ever see **Bullsnakes** in the area and the woman said they only see **Garter Snakes**. Next stopped at the Klondike Bridge and a local fisherman said he never saw a **Bullsnake** there but was pretty sure that they are present. At 1:30 I stumbled onto the Peterson Prairie to the northeast in Lyon County, Iowa. Nice place! Rolling prairie bluff country that was donated to the state by a local couple. Next...discovered the Hidden Bridge Wildlife Management Area at the northwest corner of Peterson Prairie. Also...more nice rolling bluff grassland along the east side of the Big Sioux Valley!

June 2: (Mon) Palisades State Park. Looked under rocks along the railroad grade and found 7 **Ringneck Snakes** and 2 baby **Fox Snakes**.

June 3: (Tues) Drove to Beaver Creek Nature area and met people from the Outdoor Campus in Sioux Falls. Next went to Arrowhead Park and found 17 **Ringneck Snakes** and 2 baby **Fox Snakes**. (One of the small **Ringneck Snakes** was found inside a Childs shoe!) Drove into Sioux Falls and found the Outdoor Campus Nature Center. Talked to the staff and found out who the local reptile people are to contact. Drove south to Lincoln Lakes Estates and saw 2 big **Painted Turtles** in a man-made pond. South to Lake Alvin. Saw a **Loon!!!** Locals say it has been there for a couple weeks now and that they saw a **Bald Eagle** there last year, too. Drove across the road to the east and explored the bluff grassland on the west side of the valley and walked down to the creek. Nice place! Drove to the Hidden Bridge wma across the valley in Iowa. Walked the trail down to the river. (Not only is the bridge hidden...but gone entirely!) Walked up and down the river bluffs and heard a **snake** in the grass but didn't see it. While coming upon the edge of the woods...a **Wild Turkey** exploded out of the grass at my feet (nearly causing me a heart attack!!!) and flew off into the trees. Walked back to the van.

June 4: (Wed) Drove to Gitche Manitou at noon. Saw 25 **Painted Turtles**...2 **Snappers** and 2 **Bullfrogs** in the Jasper Pool. (Old water filled quartzite quarry.) Drove south to bridge at hiway A-18 and observed 2 large **Snapping Turtles** engaged in courtship behavior. Drove across the river and into the wma along the west edge of the valley and walked the prairie grasslands again. Saw nothing. At Lake Alvin...I found a big **Prairie Garter Snake** on the north edge of the lake. At the south edge of Lake Alvin...the **Loon** is still visible out on the lake! Walked around the south



edge of the lake and found 5 **Bullfrogs**. Drove southeast along the Big Sioux and stopped at a culvert and looked under rocks. Saw a herd of **Buffalo** across the road in an open field! Stopped at Klondike Bridge then drove south



to the Canton Mound. (A high prairie bluff complex northeast of Canton, South Dakota.) Found a juvenile **Prairie Skink** under a pile of trash along side the road near the top. From the top of the Canton Mound I could see a Thundershower to the south east dropping a column of rain and the afternoon sun set up a rainbow right at about the location of Lake Lakota. Thinking this may be a good sign...I continued on through Iowa and arrived at Lake Lakota just at sundown and was greeted by the call of several **Cricket Frogs** in the shallows to the west edge of the lake! I waded into the water and saw one but missed it when I tried to catch it. Darkness soon descended and I went to Newton Hills to set up camp. At 11:00 pm I went back to the site of the calling frogs (after asking permission from the park staff if I were to catch one...could I keep it over night?) The park attendant said "Go for it. And good Luck!" At about mid-nite...after 2 or 3 failed attempts...I managed to capture a calling male **Cricket Frog** and took it back to the van and drove back to camp for the night.



June 5: (Thur) Warm sunny morning! Found an adult male **Fox Snake** in front of the Men's Outhouse! Drove to park headquarters and showed the staff the **Cricket Frog** that I had retained in a plastic container. They seemed puzzled about my excitement at the discovery! "Cricket Frogs? Are they Rare?"!!! Informed them that they were and these were the first I had heard in the region. Then drove back to Lake Lakota...photographed the frog and released it



back where I found it the night before. From there I drove to Lake Pahoja County Park in Lyon Co., Iowa and scanned the area for possible Cricket Frog habitat. Back to Minnesota.

June 23: (Mon) Arrived at Lake Alvin at 6:00 pm. Hot and Muggy! Heard a **Bullfrog** calling and 1 **Plains Toad**. No sign of the previous Loon. Followed the gravel road down the valley and found a dead **Fox Snake** west of the Klondike bridge. Drove east to Lake Pahoja but found nothing and heard no frogs calling. Went southwest through the Nelson WMA and west through Canton. Went south of town and found a dead **Fox Snake** 4 miles south of Canton at a bridge over "Fan Creek" (?) Arrived at Lake Lakota and heard approximately 6 **Cricket Frogs** calling near the boat access by the swimming beach. All the Frogs went silent as a fisherman and his wife came in from the lake. However...as soon as he began turning the crank to haul in his boat...the sound of the ratchet and chain immediately set off ALL of the **Cricket Frogs** into a frenzied chorus of clacking!!! They chirped and clicked away for nearly a minute until they all grew silent. And then...when the fisherman turned the crank again...they all chimed in all at once in response to the sound of this obviously huge rival in their midst! This curious scenario was repeated at least 3 times before the fisherman packed it up and was ready to drive away. In the meantime...I struck up a conversation with the wife and informed her that I was there to document the rare frogs that were calling nearby. With that she said: "Oh...Is THAT what's making that Awful sound?" I was too stunned to respond properly but managed to

say something about field biologists really liking that sound...but she would have none of it: her nerves were obviously too shredded to stand much more of it and they seemed to be in a hurry to get away. They soon left and I was thus left alone with the producers of "the awful sound" and soon had to admit that they were getting kind of loud and repetitive. Still...sounded like musical chimes to me! It was now after sundown and I drove east to Fairview and then east up the hill along hiway A548 and heard **Cricket Frogs** calling in a man-made pond to the north of the road! Also heard **Whip-Poor-Wills** calling in the heavily forested areas of the valley. At this time I noticed that lightning was flashing from a gathering storm to the south. Drove south to an area northeast of Hudson where I heard the faint sound of **Cricket Frogs** calling somewhere to the west of the road. Way dark now, and the wind began blowing fiercely from the coming storm. Drove a zig-zag pattern north and stopped and listened at likely wetlands. Now Lightning began hitting a little too close for comfort to the southeast so I drove fast to Lake Pahoja and listened for frogs but heard none. The storm was nearly upon me (with Tornado Warnings for the immediate area!) so I steered hard to the west and took shelter for the night at Lake Alvin where there are 2 steep bluffs surrounding the parking area. Heard no Cricket Frogs there because shortly after arrival...the shock wave hit and I was pinned down in my Van...for the Lightning was striking so close and severely that I dared not set foot out of the vehicle for fear that The Thunderbirds might take me!

June 24: (Tue) Clear and Sunny! Arrived at Lake Lakota at Noon...heard 1 **Cricket Frog** call briefly. Went to the Fairview Pond...heard no frogs calling. (Found a gravel road that leads all the way down to the pond. It is County Park land! Drove down gravel roads on the Iowa side till I came to a likely gravel pond just east of Hudson. Drove down a dead end gravel road south of Hudson and came to an abandoned bridge that went halfway out into the river. Apparently Iowa decided to take down their half of the bridge but South Dakota let their half remain...and it became a nice observation deck as I saw 14 **Spiny Softshell Turtles** basking on the sand bars below. From there...I drove west to Union Grove State Park and had a nice long cool nap in the shade of the Pine Trees...for the day had grown un-bearably hot and muggy!

...Later in the afternoon, the radio reported that a chance for severe storms was developing for Southeastern South Dakota. I then began exploring the Brule Creek Valley and drove the gravel roads down to Spink where I found 2 fresh **snake trails** in the gravel dust on a road 1 mile southwest of town. They had apparently been made only recently, as the wind was blowing and the trails were fresh and the impressions of 2 very **large serpents** crossing the road was plainly visible! Storm clouds were now gathering to the southwest as I traveled the valley down to Richland and then south to Elk Point. While at a gas station I heard that a **Tornado** was sighted near Vermillion...15 miles to the northwest. At that point the sky turned green and the sirens went off so I parked the Van downtown and waited for the weather to behave itself. After a half hour I saw that the storm was moving north so I went south and tried to get to the Missouri River. However...every gravel road I took south and east of Elk Point turned into a dead-end (usually someone's backyard) and I ended up going down to McCook Lake and the Adams Nature Area. I was disappointed to find a frightful amount of suburbia and development in the area creeping out from the edge of Sioux City! It was now 7:00 pm and the plan was to travel up the Big Sioux so I went back up north past the Loess Hills and across the river to Richland and then followed the river road north up the valley.

About 2 and a half miles northeast of Richland I heard 2 or 3 **Cricket Frogs** calling in a small wetland just east of the road. Continued on north to the hills and valleys of Union Creek...but whenever I topped a hill I could see...just 10 miles to the west...a towering column of thundercloud that the crackly AM radio station declared held a **Tornado!** Sure enough...during the past 2 hours **Tornados** had re-developed over Vermillion and were all heading generally north by northeast. I continued on, however, trailing alongside the storm (at a polite distance of course) as the sky once again turned a sickly green...then went dark as the gathering storms blotted out all remnants of light from the setting sun. I zig-zagged a route along E. Union Creek but heard nothing along the way. The goal was to try and get to 2 man-made ponds northeast of Alcester but I never found them that night...as the sky had become alive with a constant fury of pounding lightning strikes and heavy wind! I decided enough was enough and shot straight up hiway 11 in an attempt to get to Newton Hills before the Tornados got there. Just 3 and a half miles north of Alcester I heard a colony of about 3 or 4 **Cricket Frogs** calling in the ditch on the west side of the road. (This turned out to be a straightened section of Brule Creek) I had to hit the brakes and back up a good long way and then sit there and wait for them to start up again while the weather became increasingly nasty! As soon as I heard the first one call and could verify that, yes indeed, those were definitely **Cricket Frogs** in that ditch...I tore off outa there as fast as I could go! I made it to Newton Hills State Park just in time to realize that this was probably not the best place in the world to be when there are Tornados spinning around, but I decided that this was just as good a place as any to be taken out of this world by a furious wind! And while remembering the old Lakota Warrior rant of "This is a Good Day to Die!!!"...I braced myself for the coming shock wave. Which eventually came...but all that happened was the tops of the trees got rattled around pretty good and some sticks and leaves came tumbling down...but that was it! The great storm itself divided around the hills and caused widespread destruction all around...indeed it turned out to be a record night for the number of Tornados documented in the state for one evening's time! But as for me and the van and a few other campers in the park...we survived the night by coming through it OK even though we were all slightly shaken but (thankfully) not stirred!

July 7: Started at the Rock River about 2 miles northeast of the Blue Mound in Rock Co. Minn. and heard no frogs calling. Went to Blue Mound State Park at Sundown. Heard no Cricket Frogs calling even though it is one of the 3 previously documented sights in southwest Minn. Drove west to Beaver Creek at "Touch the Sky Prairie" and then followed Beaver Creek down into South Dakota. Went south to Gitche Manitou and heard several **Coyotes** calling to the southeast. Drove to Lake Alvin where I found a large **Bullfrog** sitting on the pavement of the parking lot! Suddenly another storm brewed up out of no-where so I sat it out for an hour. Rain was not letting up so I drove south to Lake Lakota where I heard 1 **Cricket Frog** calling across the lake. This was going to be a difficult night, for whenever I rolled down the window to listen for frogs...I got an ear full of rain! Tried to drive south to a pond near Moe but the gravel roads are nearly impossible to drive on because of the heavy rain. Checked out the pond north of Fairview but heard nothing. Went back to Lake Alvin for the night.

July 14: Hot and Muggy! Left Mankato early in the afternoon and arrived at Lake Ocheda in Nobles Co., Minn. Followed the creek system down to Lake Bella on the border and then drove into Iowa and looked for the highest point in the state, which I

could not locate this time. (There is some dispute as to its exact location; at times the spot is reputed to be in the middle of a corn field in Wilson township, Osceola Co., while others argue that it occurs in a Hog yard about a half mile away!) One high place that can't be missed is Ocheyedan Mound...a curious little glacial deposit that seems like a huge monolith simply because so much of the surrounding territory is so flat! Huge billowing thunderheads to the northeast, this time, assure me that the day's nasty weather is off haunting another district...and I will (for once) have a calm clear night with the frogs. Drove west through Sibley, Iowa and then further on to some gravel ponds at the Little Rock River. Continued west to Kanaranzi Creek. (Documented records show that a single colony of **Cricket Frogs** were heard along this creek back in 1939 a few miles to the north near Adrian, Minn.) However, at sundown the elusive call could not be heard so I drove west to the Rock River at the border and traveled north, checking all wetland habitats along the way, till I got to Blue Mound State Park. Again...no Cricket Frogs were heard. Then I turned south into Iowa again and began at Rock Rapids and followed the river valley south. Checked out Rock, Kanaranzi and Tom Creek but heard no frogs of any kind! South to Lakewood Corner and then southwest to Doon, Iowa where I heard 2 separate colonies of **Cricket Frogs** calling in a low wetland just on the southwest edge of Town. 2 little puddles were separated by a low grassy ridge (about a thousand feet from each other) and it sounded like 3 frogs were calling from each one. In the moonlight it appeared to be an alfalfa field! I wasn't able to return until a month later to see the area in daylight and it simply appeared to be an open abandoned field but now completely dried up. The Rock River flowed about a quarter mile to the west. From there I drove northwest up Mud Creek valley and west to lake Pahoja but heard nothing there or along the way. South through the Nelson and Kruger Tract WMA's to the pond north of Fairview where I was greeted by the sound of at least a half dozen **Cricket Frogs** calling! Also heard 2 **Whippoorwills**. It was now nearly 4 in the morning so I turned in for the night.

July 15: (Tue) Bright Sunny day...and already hot by the time I got up. Heard 2 **Cricket Frogs** still calling and saw a few **Painted Turtles** basking on logs. Drove to Lake Lakota for coffee. Heard a **Bullfrog** calling to the west. (And a **Bobwhite**?) The lake is now filled with water and the shallows where the **Cricket Frogs** were heard is now inundated and none could be heard although it was late in the morning. Also heard the first **Cicadas** of the year. Old German legend has it that when the Cicadas begin singing...the first frost will come in 6 weeks! Maybe this is true in the Black Forest, but so far I have not yet seen it happen here. (Although in some years it seems like it gets pretty close!) In the afternoon I drove back to the ditch north of Alcester where I heard the **Cricket Frogs** that night and heard 1 calling in the middle of the hot sunny day!!! (I tried to photograph the site but unfortunately the roll of film didn't catch and I got no pictures on this trip.) I then followed Brule Creek down and stopped at likely looking ponds and wetlands along the way with the intention of driving back and stopping at each one after dark. Arrived at Union Hills State Park for a long Hot nap in the shade of the trees. The park attendant came around and when questioned about snakes said she had not seen any. Continued on down Brule Creek Valley and discovered what may be likely habitat for **Prairie Rattlers**, as the land forms contain high dry grassy bluffs and are isolated from any roads. Unfortunately they are also difficult to get to without finding the landowner and asking permission to enter. About 4 miles northwest of Richland, the gravel roads become a

maze of dirt tracks and I parked the Van there and got down the Mountain Bike for some back-road exploration. However...just over by the creek I saw what appeared to be the remnants of a **dead animal** and evidence that most of the body had been recently dragged off into the ditch. I crept up to the edge of the concrete bridge, after I heard a rustling sound down in the weeds, and was greeted by a most sickening scene: There before me...quite un-aware of my presence...was a **starving yellow Cat!** It had just dragged the dried putrefied remains of a **Possum** off the road and was now trying to chew on the leathery hide. Now...I have a pretty strong stomach and there are not many things in this world that make me turn away...but what I saw at that moment nearly made me throw up right then and there! For this was obviously, at one time, someone's fine and healthy house pet that was now abandoned to a slow death by starvation. If I would have had a weapon in my hand I would have put an end to the poor creatures misery...but there I stood...quite stunned and helpless as the Cat became aware of me and slowly hobbled off into the underbrush. Took the bike and rode up the gravel road that soon became a dirt track. Found a light colored **Toad** that appeared to be a **Woodhouses Toad**. Saw 1 other further up the road. Biked around the windy back roads but saw nothing else so went back to the van and drove to an area north of Westfield, Iowa where Jeff LeClere said that a **Prairie Rattlesnake** had recently been reported. Found nothing, so went back across the Big Sioux to the spot where I heard the **Cricket Frogs** on June 24. Heard nothing, so I tried the trick of clacking 2 stones together and it worked! 4 **Cricket Frogs** began calling but only briefly...they seemed tired and soon fell silent once again. Drove north along the river road and heard 1 **Cricket Frog** calling along the west side of the river east of Lake Nixon. Sundown. Drove a course up Brule Creek again and stopped at Union Grove State Park and then continued up the creek valley. A bright golden Full Moon was shining down as I came upon a man-made reservoir 2 and a half miles southwest of Alcester to the east of the gravel road (?) {See map} and heard 2 **Cricket Frogs** calling on the north side of the pond. Drove north and west to Brule Creek and heard 1 **Cricket Frog** and 1 **Chorus Frog** in a line of trees to the southwest of the bridge. Drove 3 miles west and 2 miles north to another man-made stock pond and heard several calling frogs that may have been **Leopard Frogs**. (?) Drove east to 2 man-made reservoirs northeast of Alcester and heard several **Chorus** and **Cricket Frogs** calling in both! While on the way saw 2 young **Badgers** running down the side of the road, too. Tried to find 2 ponds near Moe but could not locate them in the dark. Back to Lake Lakota at about 4 a.m. Heard no **Cricket Frogs**, but at least 6 large **Bullfrogs** could be heard in the shallows to the west. Back to the pond north of Fairview for the night. Sung to sleep by the sound of **Cricket Frogs** and **Whippoorwills!**

August 4: Sunny and Warm! Drove to Beaver Creeks and Split Rock creek and arrived at the Hiway 42 bridge at East Sioux Falls: looked under rocks at the side of the road but only found 2 **Garter Snake** shed skins. At Gitche Manitou found 1 **Skink** and 1 **Redbelly Snake** under a rock. Drove south to the Klondike bridge and talked to a fisherman. He said he had seen no snakes in the area and had never caught a **Paddlefish** in that stretch of the river...but there are plenty of **Softshell Turtles!** Began to rain. Drove down the gravel roads of Iowa and arrived at the Fairview pond but now heard no **Cricket Frogs** calling. I was greeted instead with the nearly overwhelming stench of Pig shit in the air! Indeed: because I was situated in a deep ravine and the aroma from a nearby hog farm had drifted down into the valley, I was quite concerned that if I lie down

and go to sleep...I might not wake up again! The air was completely stagnant and I feared for my life that I might be over-whelmed by the fumes!!! However...I took a chance and was greatly relieved to have discovered, the next morning, that my eyes certainly did open and I was, in fact, still breathing and very much alive.

August 5: Drove to Lake Lakota for coffee and heard a single **Bullfrog** calling. From there, drove south to the lower Big Sioux with the intention of trapping for Turtles starting at the south and working my way north. At the Akron bridge (hiway 18) I saw a

Smooth Softshell Turtle the north on the South down and get a decent close enough to get a fuzzy furry green pancake!



basking on the mud bank to Dakota side! Tried to sneak photo but could only get picture of what looked like a However...I could plainly

see, through my spotting telescope, its bright milky white chin and throat clearly lit up by the morning sun! Drove to the boat access at the hiway 50 bridge east of Richland and put my canoe into the river. Paddled upstream and put in 3 turtle traps along the way. (I used modified Crab fishing traps made of nylon mesh with a collapsible aluminum frame.) For bait I used a combination imitation Crab meat and canned Sardines (in soybean oil...no hot mustard sauce, please!) Along the way I saw several **Spiny Softshell Turtles** slide off the sand bars. It was a clear, calm, and warm sunny day and the river level was low, but there was just enough water to keep the boat up and moving.

Gradually however, after several hours, popcorn thunderheads began forming to the northeast and I turned back downstream and began checking the traps. The first 2 were empty but the third one contained a huge **Snapping Turtle** that put up such a struggle that I was barely able to get it out! While I was at it...rain began falling and the furious

Turtle nearly caught one collected the traps and a torrential downpour that weather to clear I had meat and Sardines. (The sky soon cleared and off I Went back across the Big Creek coulees thinking up some **snakes**, but except some more small



of my fingers. Finally got it out, got to the canoe access just in time for lasted an hour! While waiting for the lunch...consisting of imitation Crab stuff works both ways, you know) The went to drive the Loess Hills loop. Sioux and drove around the Brule that the rain and humidity would scare found nothing crawling along the way **Woodhouses Toads** at the Acron

bridge. Sundown now...so I found a county park (and boat access) along the river north of town and settled in for the night. A group of local fisherman were camped nearby so I went over and joined in the conversation. One of them told me he had seen a big **Rattlesnake** at the Elk Point Sand Dunes in 1996. None of them had seen or heard of sightings of **Rattlers** in the hills of Union County to the west.

August 6: Clear and sunny. Put the boat in and paddled upstream once again, putting in traps along the way. Saw about 20 **Spiny Softshells** and maybe 2 **Smooth Softshells** (couldn't tell for sure) Checked the sand bars for nests and eggs but found none. Paddled



up to Indian Creek (?) and turned back downstream. Saw about a dozen old cars and trucks right in the middle of the river, and by the looks of it...they had been there for quite some

time! Somewhere along the way, my attention was attracted to a large fragment of bone in the mud. It turned out to be the partial remains of a **huge skull** with horns! I carefully photographed every detail of the thing and the area before I began excavating the remains. (Upon returning to Mankato it was determined that these were the remains of **Bison Antiquas**.) The skull was carefully positioned in the canoe and I continued on to check the traps...all of them empty.



Arrived back at the boat landing at 6:00 and loaded up the boat and the skull. Extremely hot and humid day! Drove to Acron for fresh water at the city park, which incidentally, seemed to be the best tasting water I've had in a long time! Next, drove back down into the Loess Hills and drove the gravel roads. Watched the sundown at the Broken Kettle Nature area and then went to the 5 Ridges Prairie with the intention of staying the night in the parking area near the gate. It was now after dark when I arrived and I was greeted at the parking area by the sight of several vehicles parked down below. As I turned off the motor to my van, I stepped out and was momentarily distracted by a **Whippoorwill** frantically calling in the trees above. Before I knew what was happening, a bright light was shining in my eyes and I heard another call in the night that said: "County Sheriff!!!" I was quite stunned and surprised and finally managed to respond with..."Biological Survey!!!" As soon as the authorities had determined that I was not a threat and only a poor, hot, sweat soaked scientist...they informed me that they were out here looking for a body! Apparently an older man had gone out onto the maze of ridges and valleys several days ago and had not yet returned. They were just finishing up another days unsuccessful search for the man, and all feared that he had died out there somewhere. The cop informed me that there were lots of **Prairie Rattlers** out in the dry hills but even more of them up at the Nature Conservancy area! He also said it was probably not a good idea to spend the night here...as this spot was notorious for a rough crowd frequenting the area after sundown! "Or at the very least...teenagers drinkin' beer all night and hollerin so you won't get a minutes rest!" With that, I informed him that I would be off to a quieter place, and that I hoped that they would eventually find the missing gentleman. I then drove back to the boat access north of Acron for the night.

August 7: Clear and sunny morning! Drove back to the bridge east of Richland and saw the **Smooth Softshell Turtle** in the exact spot as the day before! Also...saw another one partially buried in the mud nearby. Drove north on the gravel road along the river to the Bent River Natural Area and saw 4 **Smooth Softshells** on the Iowa side. (2 miles southwest of Hawarden) Saw 2 **Spiny Softshells** at the bridge west of Hawarden. Drove east and north and found the Oak Grove County Park. (Sioux Co., Iowa) Drove down to the river and saw 2 **Softshell Turtles** on the sand bar on the South Dakota side. One of them looks funny...almost like it could be an intergrade of a *Spinifera* and *Mutica*! Drove to Rock/Sioux natural area at the mouth of the Rock River but saw no turtles. Saw 1 **Spiny Softshell** at the "half bridge" south of Hudson and 1 **Spiny** at the bridge east of Hudson. (This bridge is extremely dangerous...as it is very narrow and large trucks are numerous!) Drove north to the Big Sioux River Wildlife Area...a large expanse of public hunting land on the Iowa side if the valley. Walked the long trail down to the river and came to a fence where a sign lay face down in the dirt. I picked it up and a **Skink** went

scurrying away! (The sign said: Do Not Block Drive) Also found a **Redbelly Snake** in a pile of rocks nearby. Drove up to a scenic spot over the valley near Fairview. Getting to be a really Hot day!!! I soon realize I am getting sun-burned! Drove north up through the Inspiration Hills and stopped at the bridge at Beloit but saw no turtles. Turned south and stopped at the river near Newton Hills State Park but saw nothing...river is low and rocky. Drove up the hill and into the park and tried to rest in the shade. Soon realized I may have developed slight heat stroke! Finally napped and cooled down a bit. Soon one of the park staff (Cris Rahn) came by and I showed him the **skull** I had found the day before. He told me that it definitely was Not a modern day **Bison**, as the horns curved straight out while **Buffalo** horns curved forward! He then told me that 2 large **Fox Snakes** live under the park entrance building and that, sometimes late in the afternoon while sitting out front and quietly reading a book, **Skinks** come out from under the wooden boardwalk and crawl over his boots! I took the bike and went down into the deep valley in the park. Conditions were very dry but small **Plains** and **Canadian Toads** were out hopping around. Biked south out of the park to the culvert and found a dozen baby **Skinks** under the rocks! Sundown and back to camp. Heard **Screech Owls**, **Foxes** yelping and **Bullfrogs** bellowing throughout the night.



August 8: Clear and sunny. Drove north and found an old abandoned dam at Canton. Saw 5 **Spiny Softshells**. Saw 1 at the bridge east of town. At the old iron bridge north of there...I saw a mother **Deer** lead 4 **spotted Fawns** across the river! No Turtles. Saw 1 **Spiny Softshell** and 2 **Painted Turtles** at the Klondike bridge. Cloudy now and saw no more Turtles basking that day.

August 24: (Sun) Saw 1 dead **Jack rabbit** on the hiway between Windom and Worthington, Minn. 2 **Skinks** at Blue Mound State Park. (The new bike trail is open!)

August 25: (Mon) Cloudy day with light rain. Drove to the hiway 42 bridge east of Sioux Falls. Found no road kills and nothing under the rocks in the ditch except a **Mouse**. Drove to Gitche Manitou: Saw a **Skink** and baby **Fox Snake** under the rocks. At the hiway A-18 bridge (Iowa side) found a dead sub-adult female **Fox Snake**. Saw no Turtles at the bridge. Drove south to the Klondike bridge...no Turtles. Walked down along the river. Walked over to the ghost town of Klondike Iowa and saw a **Skink** under a piece of tin. Drove south through the Big Sioux wma. Hot and muggy!!! Still cloudy and rain falls occasionally at the iron bridge north of Canton...but the air is perfectly still! I walk the isolated gravel roads up and down the hills but I find it hard to concentrate and have to lay down in the van every half hour or so! (Not sure if it's the heat or a touch of illness) Drove south to an area of the Big Sioux wma and walked down an abandoned road. Found nothing and back at the van saw a heavy column of a downpour in the distance to the southeast! Drove to Newton Hills and found a dead **Fox Snake** at the top of the hill by the park entrance. Parked at Lake Lakota and heard 2 **Bullfrogs** calling. Now have become kind of dizzy and dis-orientated so I drove into the park and decided to camp early for the night. Road the bike around a bit but soon turned in early and went to sleep.

August 26: (Tue) Woke up to a bright and sunny day feeling fine! (Later on... I wonder of I'd had a slight touch of the West Nile Virus or something!!!) Saw no Turtles at the

Pleasantview bridge. Saw 3 **Spiny Softshells** at the Hudson bridge but no Turtles at the bridge to the south. No Turtles at the Rock River...but saw 1 **Spiny** where the Rock dumps into the Big Sioux. Drove south to Oak Grove County Park in Iowa and saw **10 Smooth Softshell Turtles** basking on a sand bar in the middle of the river!!! Tried once again to take identifiable photos of them but just can't get close enough! 3 of them appeared to be old females and 1 **Spiny Softshell** was clearly visible on the other end of the sand bar...well away from the others! At this point a rather strange thing occurred: it was not yet 11:00 and the day was getting hot...but for some reason I felt that the research for that week was done and I drove straight back to Luverne without stopping along the way like I usually do. I arrived at the Veterans home to have coffee with my Father (like usual) but when my Mother failed to arrive, I soon found out that she had been admitted to the hospital that morning! She had complained of chest pains and was brought in by her sister. My Aunts and Uncles frantically tried to call my brothers and sisters who are all scattered far and wide across the landscape...but were able to contact them all by phone. I was the only one who was totally inaccessible...yet was the first one back on the scene!!! They all agreed it must have been divine intervention of some kind. And looking back at it now...I have no reason to disagree. I'll go with Turtle Magic any day! (Mom turned out just fine, too. Gas buildup...apparently) She'll probably outlive us all!

Sept. 9, 10, and 11: A 3 day deluge dumped up to 8 inches on Southwest Minnesota!!!

Sept. 14: (Sunday) Blue Mound State Park: drove up the south road looking for road kills but found nothing. Drove northwest 2 and a half miles to the Touch The Sky Prairie and found a **Pig Skull** with 2 **Deer Mice** living inside! While wandering among the quartzite boulders I saw a large **Jackrabbit** bound up out of the grass and run off a ways. While watching it from a distance...the big hare literally vanished before my eyes!!! Spent a good couple hours looking under the numerous rocks in the area but found nothing but more **Hog bones!** Drove to Palisades State Park and found a **Ringneck Snake** under a railroad tie. Also saw 1 small dead **Garter Snake** on the road. Back to Luverne.

Sept. 15: (Mon) Clear and Sunny. Drove to Beaver Creek Nature area and biked around on the gravel roads but found nothing. Drove into Sioux Falls and stopped in at the Great Plains Zoo and met Tom Ness. Talked about an article about **Lined Snakes** for the local paper, the Argus Leader. Next drove to the Outdoor Campus and one of the staff said that someone brought in a **Lined Snake** last Winter that was dug up out of the ground! Unfortunately they didn't record the place or how deep in the ground it was found but they said that the thing didn't live long after being brought in. Drove to the gravel road east of the Indian Hills subdivision where I found all the **Lined Snakes** the year before but it was still too early and I found nothing. Drove to Arrowhead Park and looked under the numerous quartzite rocks and found several **Ringneck Snakes** both big and small and also briefly saw 1 small **spotted snake** that appeared to have a white belly! This may have been a hatchling **Bull Snake** but I only caught a glimpse of it as it quickly disappeared down a hole. Saw 1 dead adult female **Fox Snake** at the hiway 42 bridge. Drove back to Palisades State Park and biked around all the roads both in and outside the park but only saw a few dead **Garter Snakes**.

October 3: (Friday) After nearly an entire week of unusually cold temperatures with nights as low as the 20's and a hard freeze gripping the Mankato area...temps quickly rebounded and 1 small live **Brown Snake** was seen crossing the river road just west of Mankato. 1 live baby **Fox Snake** was found at the Swan Lake outlet and 3 DOR were seen that afternoon along with several **Garter Snakes**. The Fall migration has begun!

October 5: (Sunday) Clear, Sunny and Warm! Drove to the Jeffers Petroglyphs in Cottonwood Co., Minn. Found a dead baby **Fox Snake** at the park entrance and 2 more a half mile to the west on the gravel road. Arrived at the Blue Mound State Park and found a dead **Lined Snake** on the road to the interpretive center. (South road) Biked the new trail that leads around the Mound to the south and east and found 2 live **Redbelly Snakes**. Found 1 live baby **Fox Snake** crawling up the wall of the park headquarters! Saw about 8 dead **Redbelly Snakes** on the road inside the park.

October 6: (Mon) Clear and warm. Drove to the Big Sioux Rec. Area and immediately lost count of all the **Redbelly Snakes** (both living and dead) on the parks road and trail! Biked up to the Indian Hills sub-division and found a dead **Lined Snake** {retained specimen #1} on one of the roads just off the main gravel road. (263 st.) Biked west to the hiway (479 ave.) and turned north. Found 3 dead **Lined Snakes** on the hiway. {retained specimen #2} Found 2 **Lined Snakes** on "Callies Road"...a dead end gravel



road that leads east off of the hiway. 1 was dead at the entrance and 1 was a live adult that was crawling from a grassy field to a residential area. At 2:45 arrived at the Great Plains Zoo and finalized the details of an article for the newspaper. 4:00 drove north to Dell Rapids and biked the roads along the "Dells of the Sioux"

quartzite outcrop. Found 2 baby **Plains Garter Snakes**... 1 live, 1 dead. On a hiway to the southeast (somewhere between Baltic and Sherman) I saw a light colored animal dead on the side of the road so I stopped and it turned out to be a pure white **Albino Possum!!!** Arrived at "Devils Gulch" and found a dead baby **Fox Snake** on the road leading to the Jesse James Jump Site. Found 2 dead **Ringneck Snakes** at the railroad crossing north of Palisades State Park. {specimen} Found 1 dead baby **Fox Snake** at the entrance to the park and found 1 dead **Ringneck Snake** at the usual spot across the bridge in the park



October 7 (Tue) The Sioux Falls Argus Leader has an article (with photos) about **Lined Snakes!!!** "Yours Truly" is generously mentioned as contributing valuable field research information to the project! 10:30am...one live baby **Plains Garter Snake** on the gravel road south of Blood Run Creek, Iowa. Lake Alvin...4 dead **Redbelly Snakes** on the hiway at the south end of the lake. From there, drove north to the Lincoln Lakes Estates (directly across the valley from Blood Run Creek) I saw 2 **Painted Turtles** basking in a man made pond and found a dead adult female **Lined Snake** and its 1 un-born baby on the



road. {specimen} These 2 had been dead for several days (and quite dried out) and when I picked up what I thought was one...a small remnant of what I thought was the tail remained on the pavement. Upon closer examination...it turned out to be a fully formed baby although it measured no longer than 2 inches! No others were evident in the area. The female was



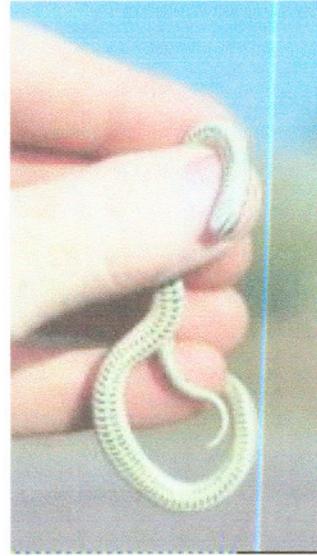
crawling from a cornfield and was heading to an open yard near a house. Natural grassy habitat is some distance away and this location is one of the most un-natural cropland/suburban areas where I have yet encountered these snakes! Drove south to the Klondike Bridge. Found plenty of **Redbellies** and both **Prairie** and **Red Garters** on both sides.

Took the bike and biked up the hill to the west from the bridge and found a dead **Lined Snake** halfway up the hill! {photo/specimen} The area surrounding this individual was open grassland on one side and a heavily grazed cow pasture on the other. {photo} Went back to the van and on my way out I found a live baby **Fox Snake** crossing the road. Drove east to Lake Pahoja, Iowa and saw 1 **Leopard Frog** and 1 baby **Plains Garter Snake**. Went south to the Big Sioux WMA (Nelson Tract) and found a dead baby **Bull Snake** on the gravel road! Next...crossed the river and went up to the Canton Mound.



Saw only a small **Deer Mouse** under a piece of plywood. Parked at the bridge east of Canton and biked up the hill to the east on hiway 18. Found a dead **Lined Snake** at the top of the hill. {photo/specimen} Also photographed the landscape. Individual was coming from an open grassy ravine on the edge of the river valley. Sundown. Newton Hills State Park. Heard **Screech Owls** calling in the night.

October 8: (Wed) In the morning one of the park staff comes around and said that he saw the article in the paper the day before. He informed me that he had seen a **Lined Snake** out on the road just yesterday and that there were quite a few of them in the area. He also said that he had recently seen a **Bullsnake** at a nearby farm that measured nearly 6 feet in length! I jumped on the bike and rode down the valley in the park and then south to Lake Lakota...but just around the corner of the hiway I found a live adult **Lined Snake** crossing hiway CR 140 just east of the lake. Again...it was found in an open grassy area. It also turned out to be the most vicious **Lined Snake** I have yet encountered! When approached...the snake immediately recoiled and made several false strikes before I picked it up. When held in my hand to take the photo it appeared to go into a slight coma as if I had squeezed it too tight! It opened its mouth and rolled out its tongue. This particular individual appeared to have numerous small scars and may have been very old. Took it across the road in the direction it was traveling and released it in the grass. I immediately turned back to the park and informed the lady in the office that I had found one. She said that she too had read the article and wondered why Newton Hills hadn't at all been mentioned as having so many of them, too!!! Drove south to Hudson and biked the road east up the hiway into Iowa. Found several **Redbellys** and **Garters**. Back to the van and then drove south to the mouth of the Rock River and just south of the corner of B40 and K18 I found a fresh road-killed adult **Lined Snake**. {Photo/specimen} Next stopped at Oak Grove Co. Park and met the park staff. When I showed them the dead **Lined Snake** I was informed that a **Brown Snake** was recently found in the Park!!! Her description matched, too and I told her if another one was found to retain the body or take a photo and CALL me immediately! She also mentioned that there were lots of **Fox Snakes** in the park. Drove down to the river and biked the roads in the park. Found a dead baby **Fox Snake** near the park headquarters. Also 2 dead **Redbellys** and a couple **Garters**. From there I decided to travel south to the Loess Hills and drove the gravel roads but found surprisingly few road-kills of any kind. At hiway C43 I took down the bike and rode east up the hill and found a dead baby **Fox Snake**. Drove back north thru the hills and crossed the Big Sioux at Westfield. Found a dead **Racer Snake** on hiway 50 at Richland...right at the base of the hill! It was a sub-adult, as the faint remnant of its juvenile pattern could still just barely be seen. Drove around the hills and valleys of Brule Creek. Stopped to take a photo of a fine **Red Sided Garter Snake** and a kid on a tractor came by pulling a load of hay. He said he had never seen **Rattlesnakes** in the area but sees **Bullsnakes** on occasion. He said that "Old Timers" talk of **Rattlers** in the hills of Union Co., but that they hadn't seen any now for 20 years or so. On a gravel road 1 mile southwest of Spink I found a live but badly damaged baby **Ringneck Snake**. A half mile to the south I saw a **Cowboy** throwing out bales of hay and asked him if he's ever seen **Rattlesnakes** in the area. He said he's been there for 5 years and hadn't seen any...but I should go and talk to his boss Dale Swanson the ranch owner who had been there since the beginning of time! Wrote down box number 35316 and intended to stop by the next day but didn't make it back there. Biked up and down the hills on hiway 48 (?) but found nothing. Windy! Sundown. Camped for the night at Union Grove State Park.



October 9: (Thur) First thing in the morning I found a dead baby **Fox Snake** on the road right in front of the Men's restroom! After coffee...I walked the bluff trail and found a



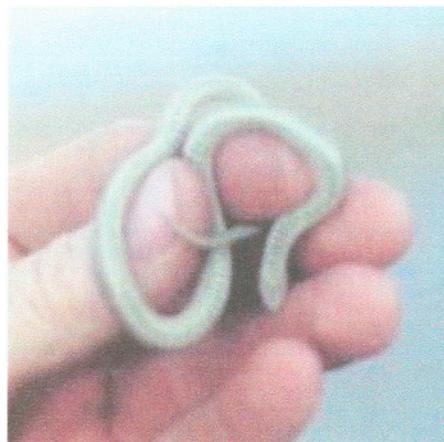
live baby **Fox Snake**. Biked around the park roads but found nothing. Biked out of the park and north on the hiway and found a live yearling **Fox Snake** just past Brule Creek. Back to the park. Drove south on the hiway (?) and found a dead baby **Fox Snake** just south of Brule Creek and another one about a mile and a half north of Midway. Drove west to Spirit Mound and walked up to the top. Extremely windy!!! Nice view. Clear, sunny and warm. Drove back east to Brule Creek and down to Richland and took the gravel river road north. Found a baby **Fox Snake** where the road nears the river. Found a dead baby **Fox Snake** where the road turns west and yet another one on Co. Road 307 St. where the road turns east and halfway down the hill. Stopped at the Bent River wma along the Big Sioux and saw a **Smooth Softshell Turtle** basking on the Iowa side! (This is the latest in the year I have ever seen a **Softshell Turtle** basking) Further on...found a dead baby **Fox Snake** at the corner of Co. Rd 483 and Virginia St. (Photo) Saw 1 dead **Redbelly Snake** on 299 below the hill near the creek. (See map for details on these locations)

Drove north to Fairview and biked up the hill to the east (across the river in Iowa) Sundown. Back down the hill. Found a dead baby **Fox Snake** near the **Cricket Frog Pond**. Found a live adult **Lined Snake** on hiway A548 at the base of the Inspiration Hills.

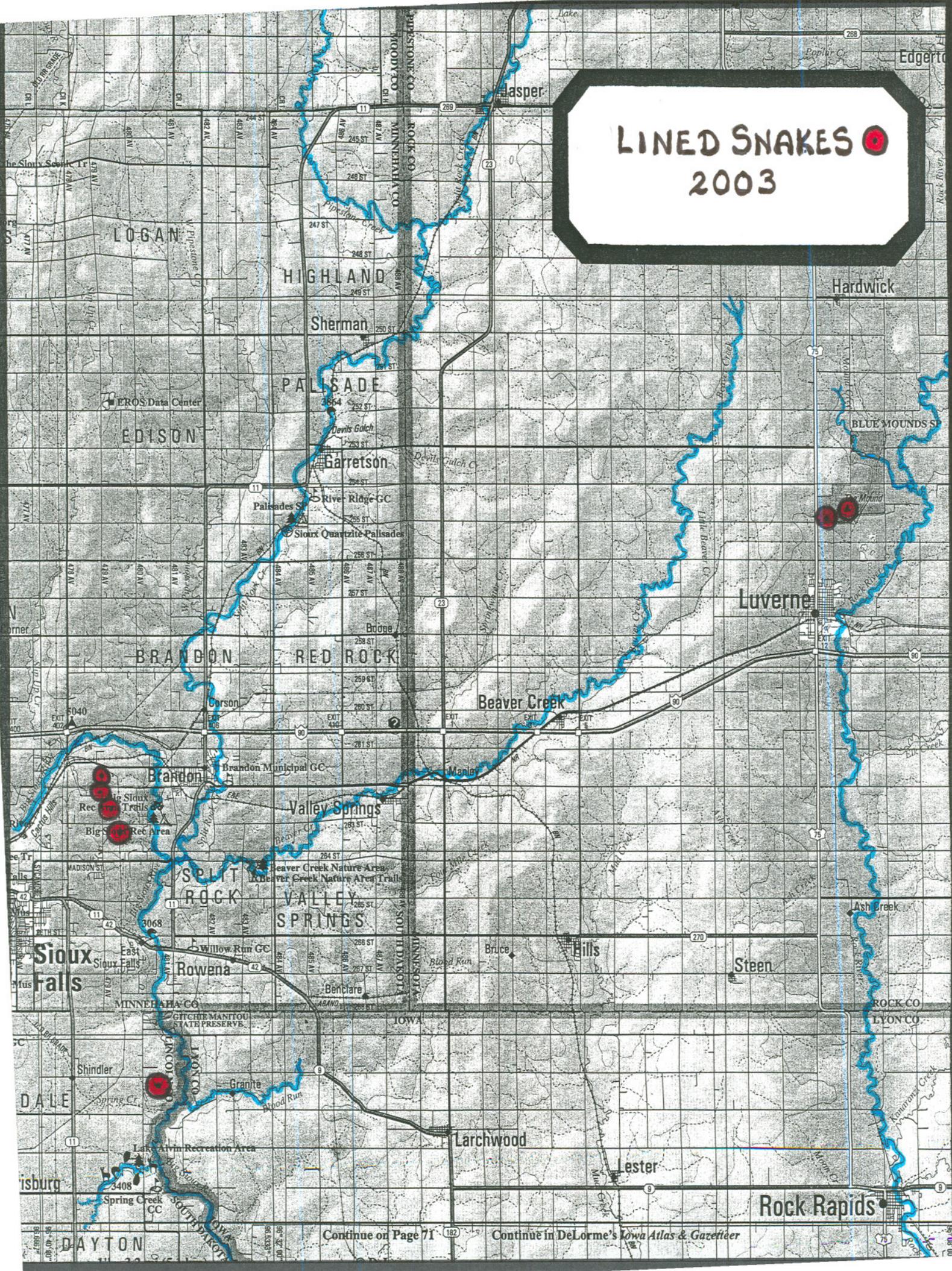


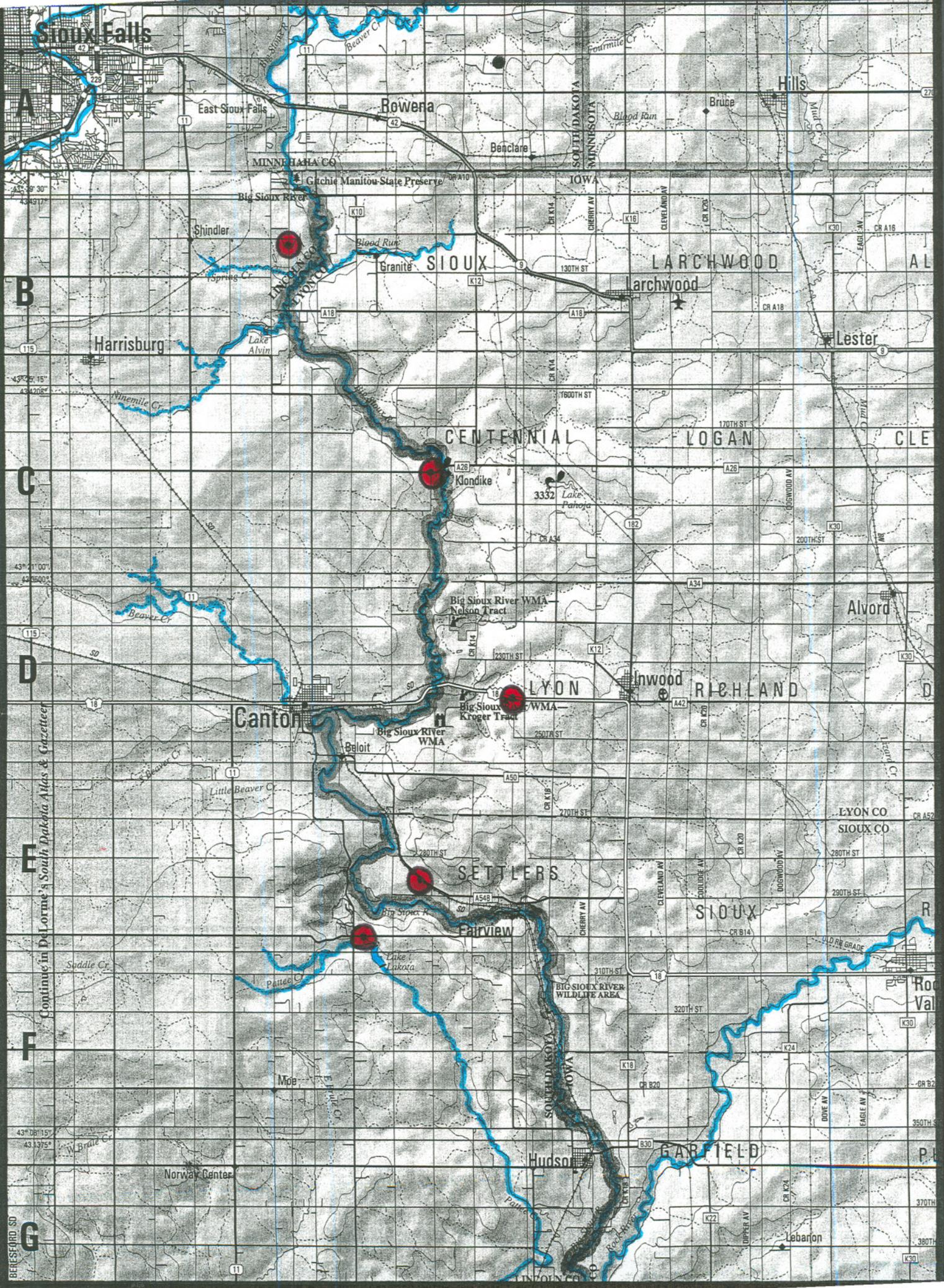
Back to the van. Back to Newton Hills for the night.

October 10: (Friday) Cloudy and breezy. Air is extremely damp! Drove east thru the Inspiration Hills and on to the Rock River and followed it north back to the Blue Mound. Found a dead **Lined Snake** on the south road at the bottom of the hill. Biked the north road into the park and found 7 dead **Redbelly Snakes**.



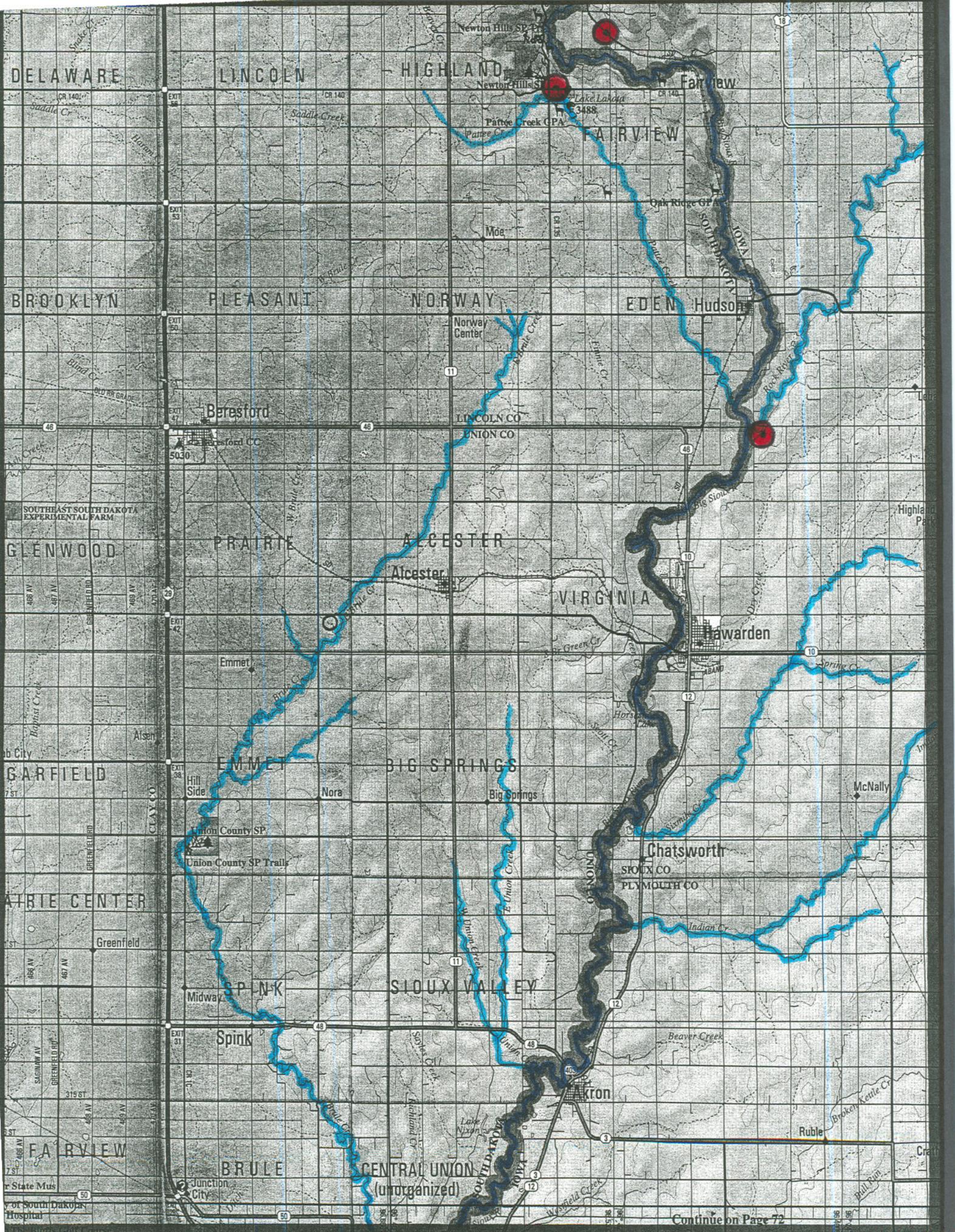
LINED SNAKES 2003





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BENEFICIAL SD



DELAWARE

LINCOLN

HIGHLAND

Fairview

BROOKLYN

PLEASANT

NORWAY

EDEN

Hudson

GLENWOOD

PRAIRIE

ALCESTER

VIRGINIA

Hawarden

GARFIELD

EMMET

BIG SPRINGS

Chatsworth

FAIRVIEW

SPINK

SIOUX VALLEY

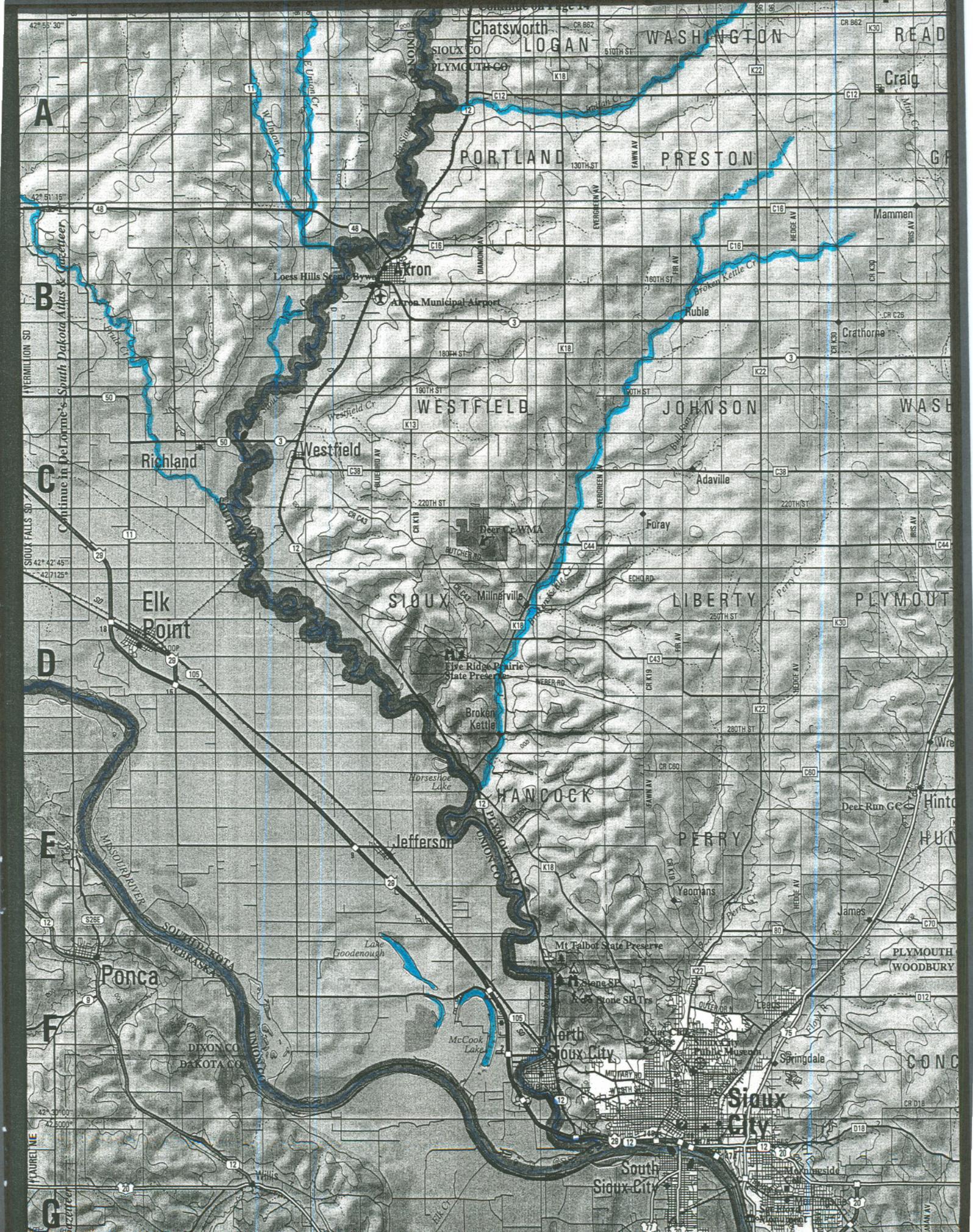
CHATS WORTH
SIOUX CO
PLYMOUTH CO

FAIRVIEW

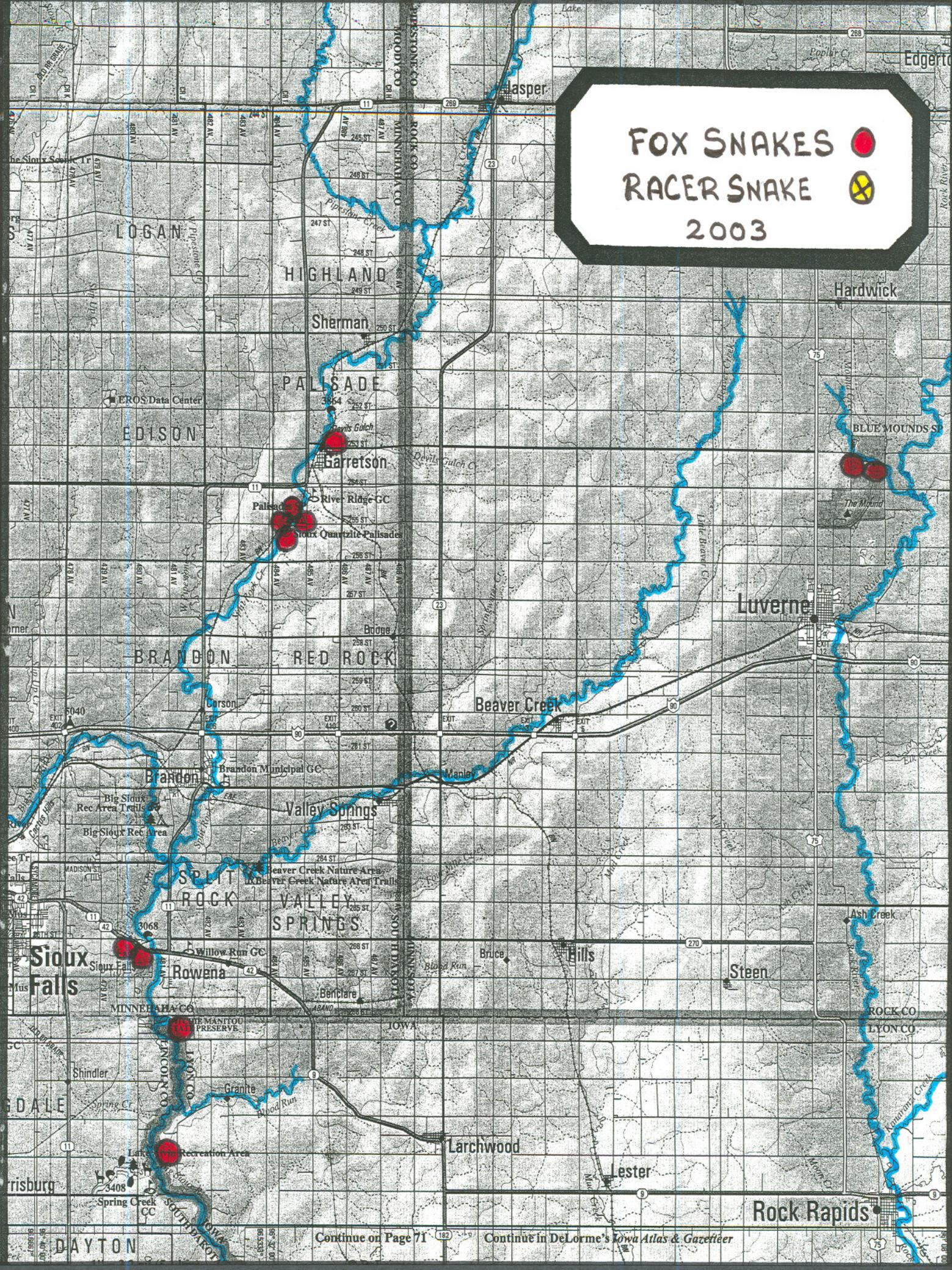
BRULE

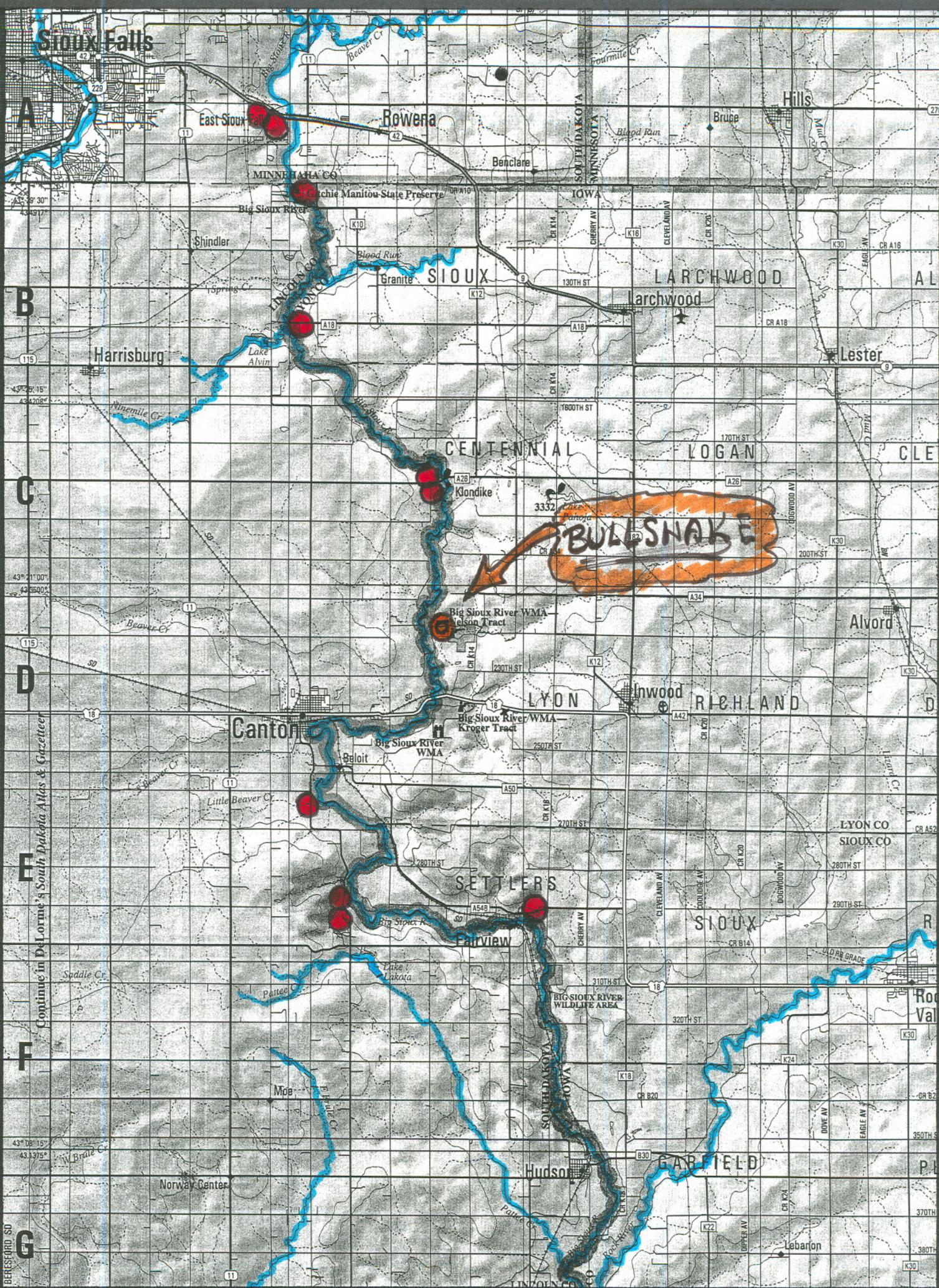
CENTRAL UNION
(unorganized)

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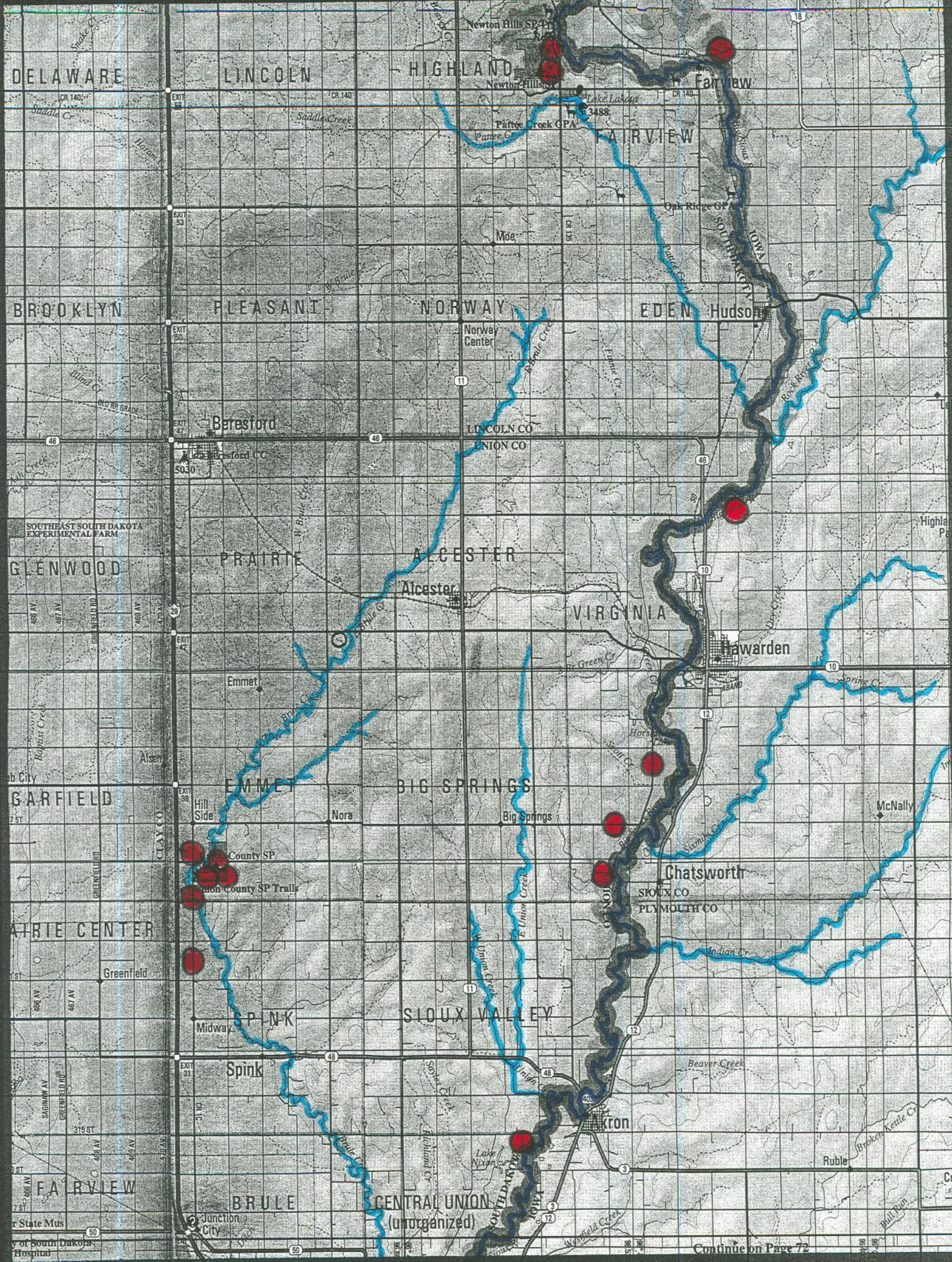
FOX SNAKES ●
RACER SNAKE ●
2003



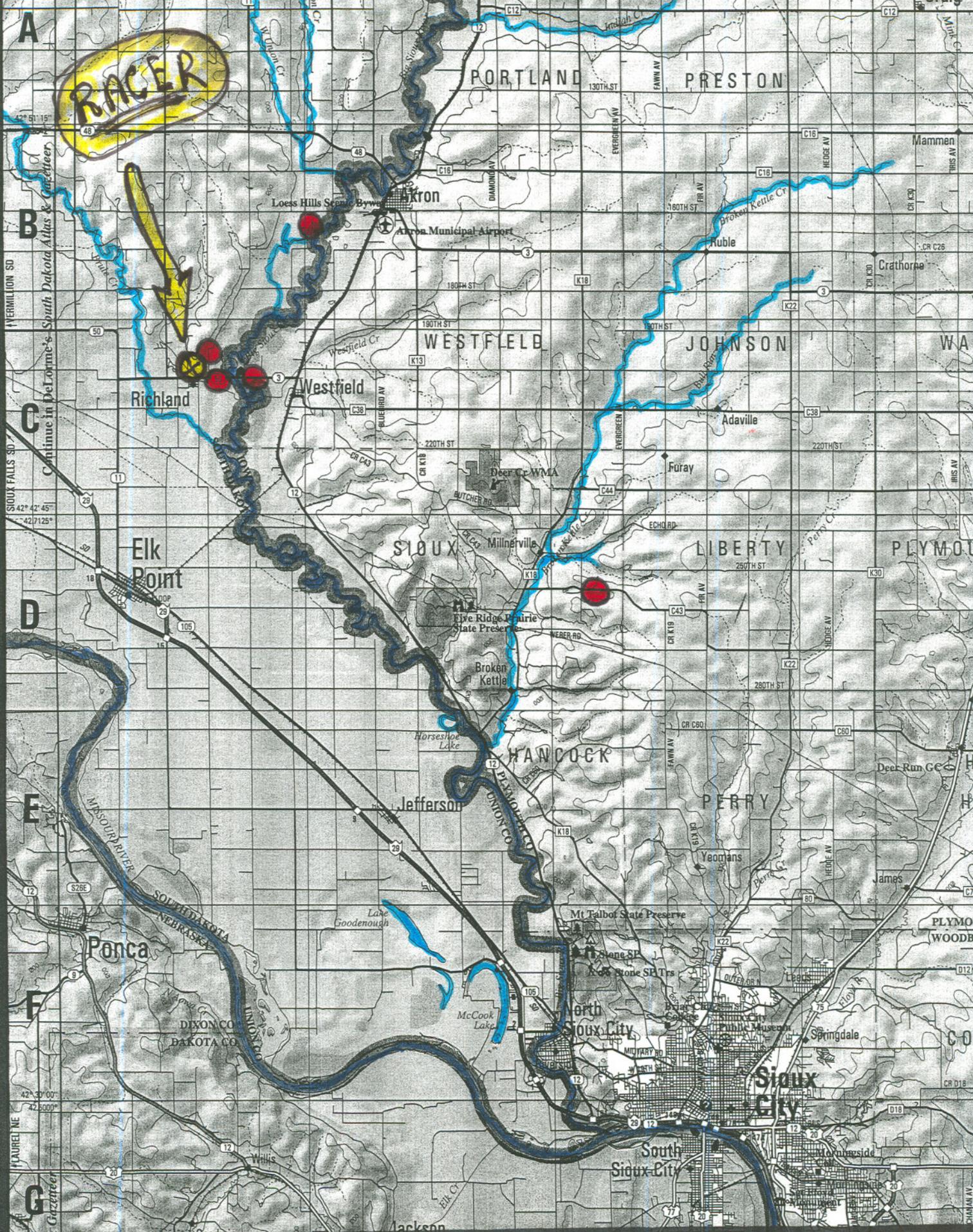


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BULLSNAKE



RACER



A

B

C

D

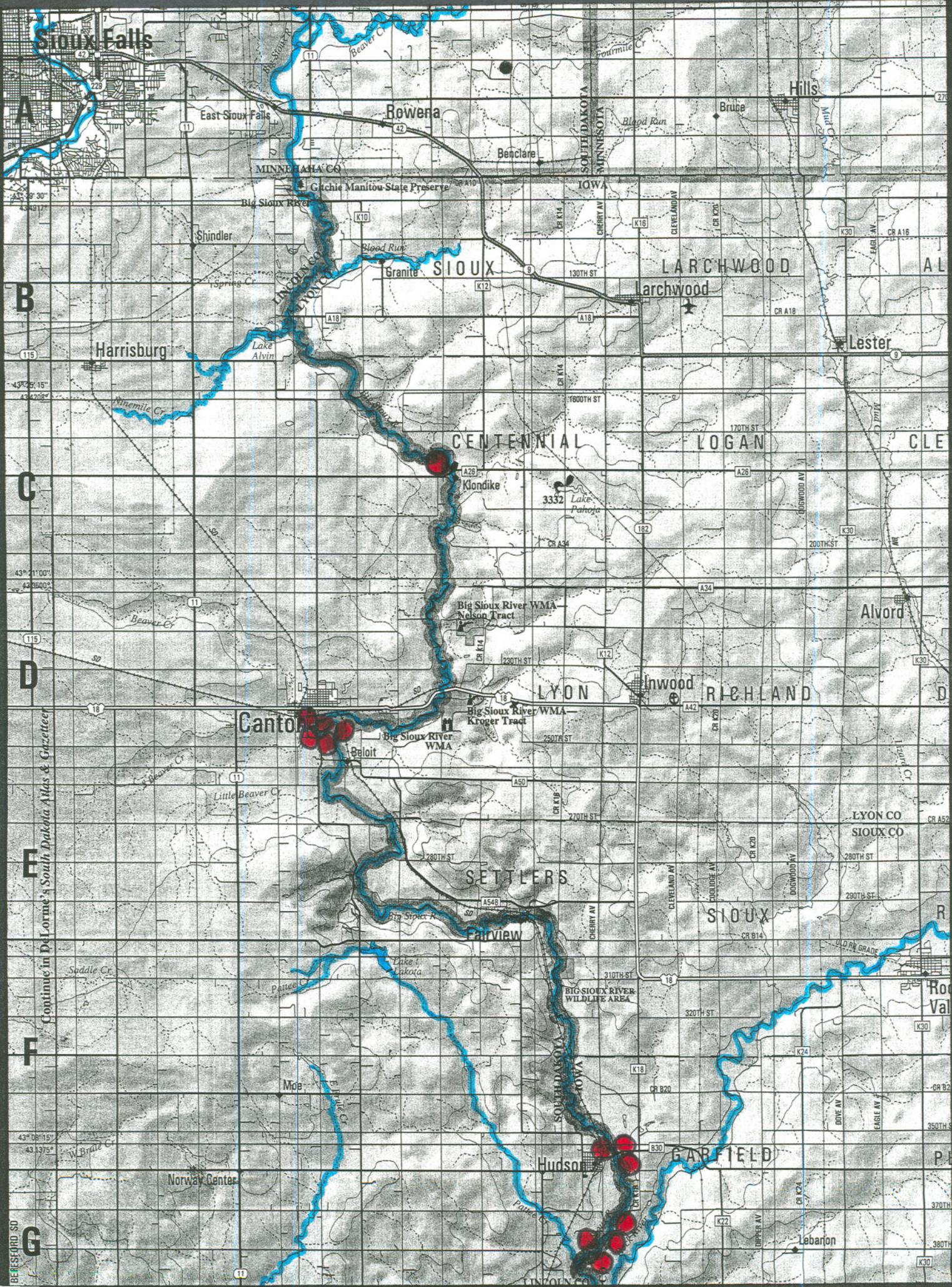
E

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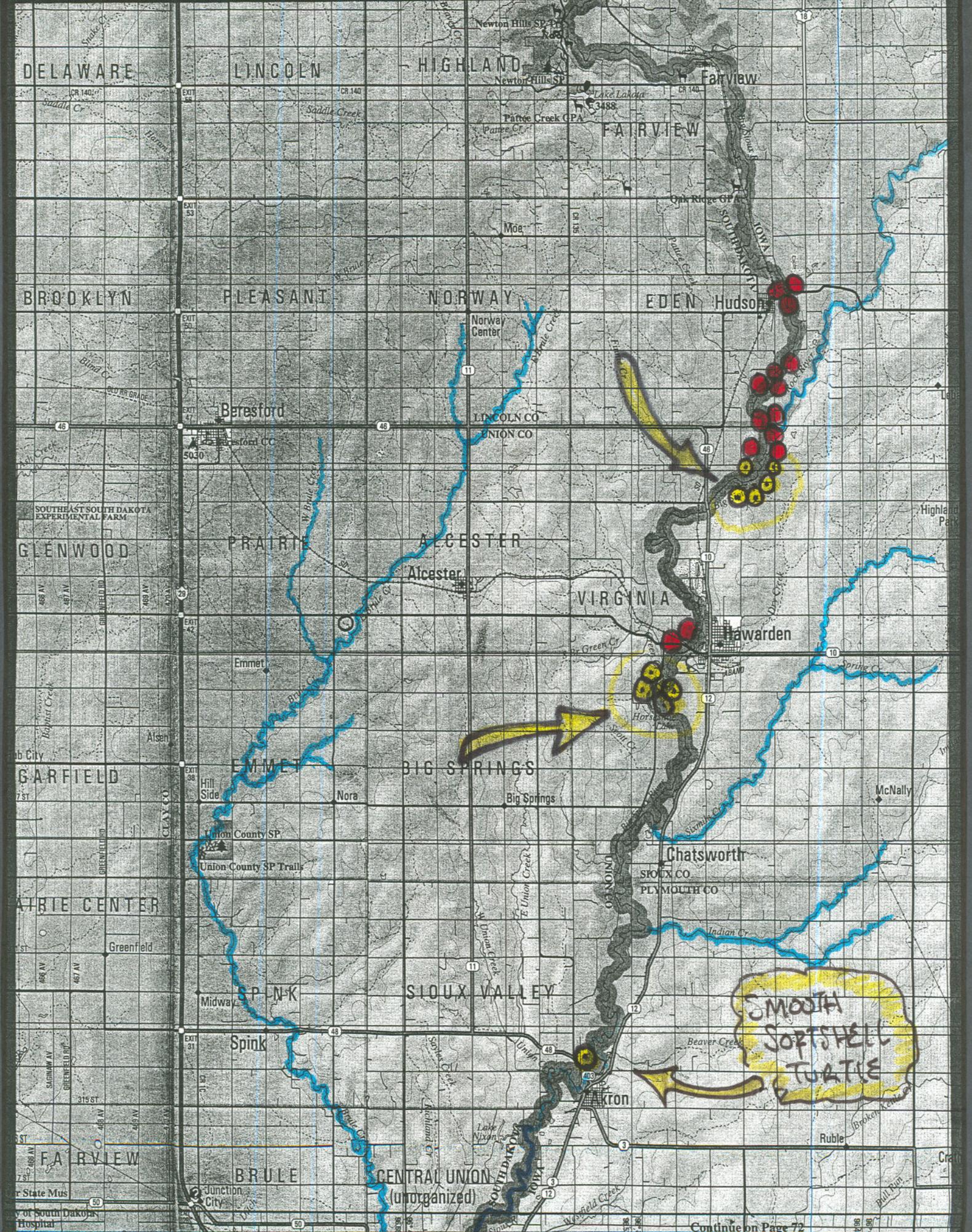
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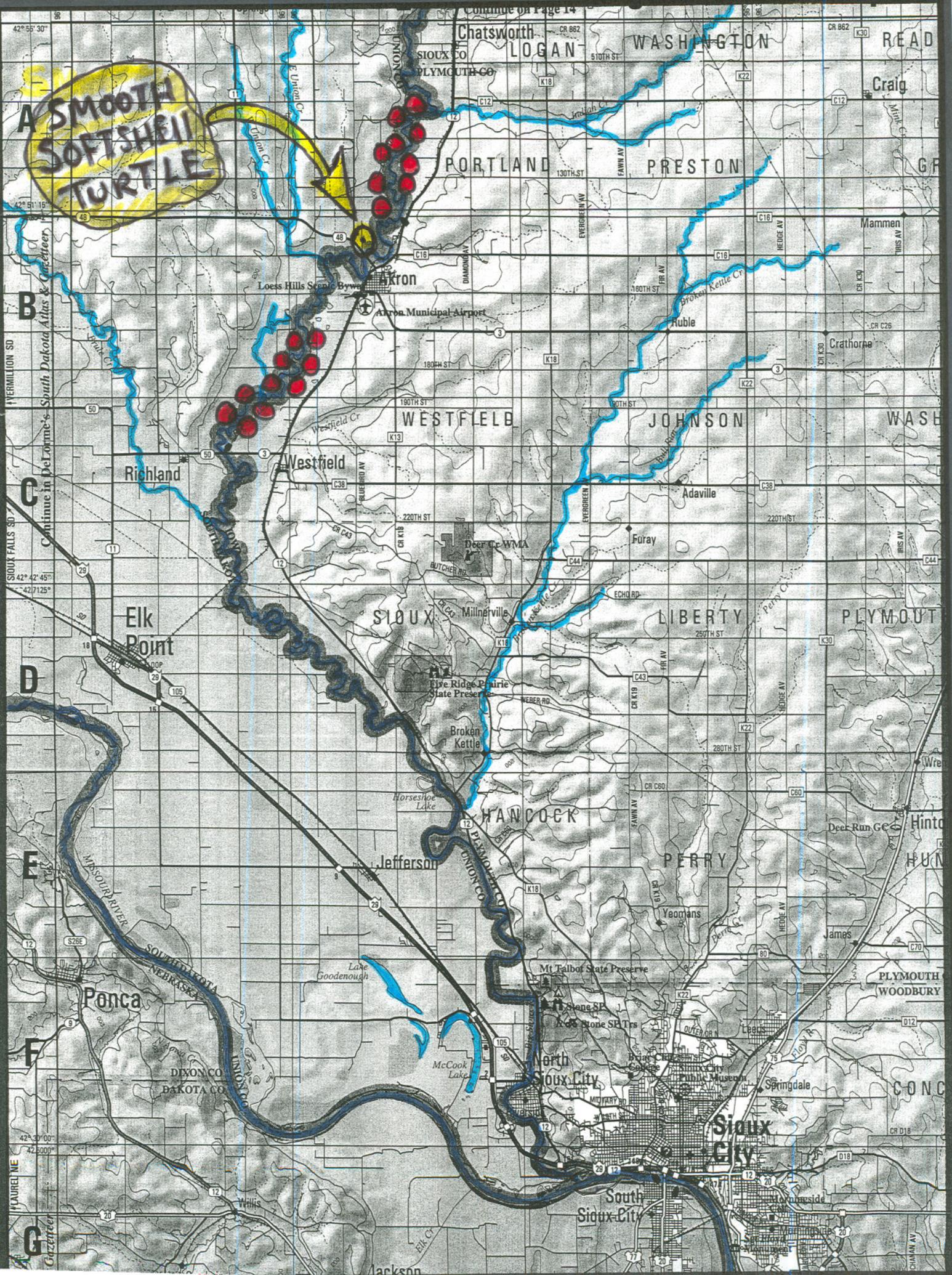
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BEVERLY SD



SMOOTH
SOFTSHELL
TURTLE

A SMOOTH
SOFTSHELL
TURTLE



B
C
D
E
F
G

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LAUREL NE
Gazetteer

CRICKET FROGS
BULL FROGS
2003



**OLD RECORDS
FROM 1939**

Hardwick

BLUE MOUNDS ST

Luverne

Beaver Creek

Valley Springs

SPLIT ROCK
VALLEY SPRINGS

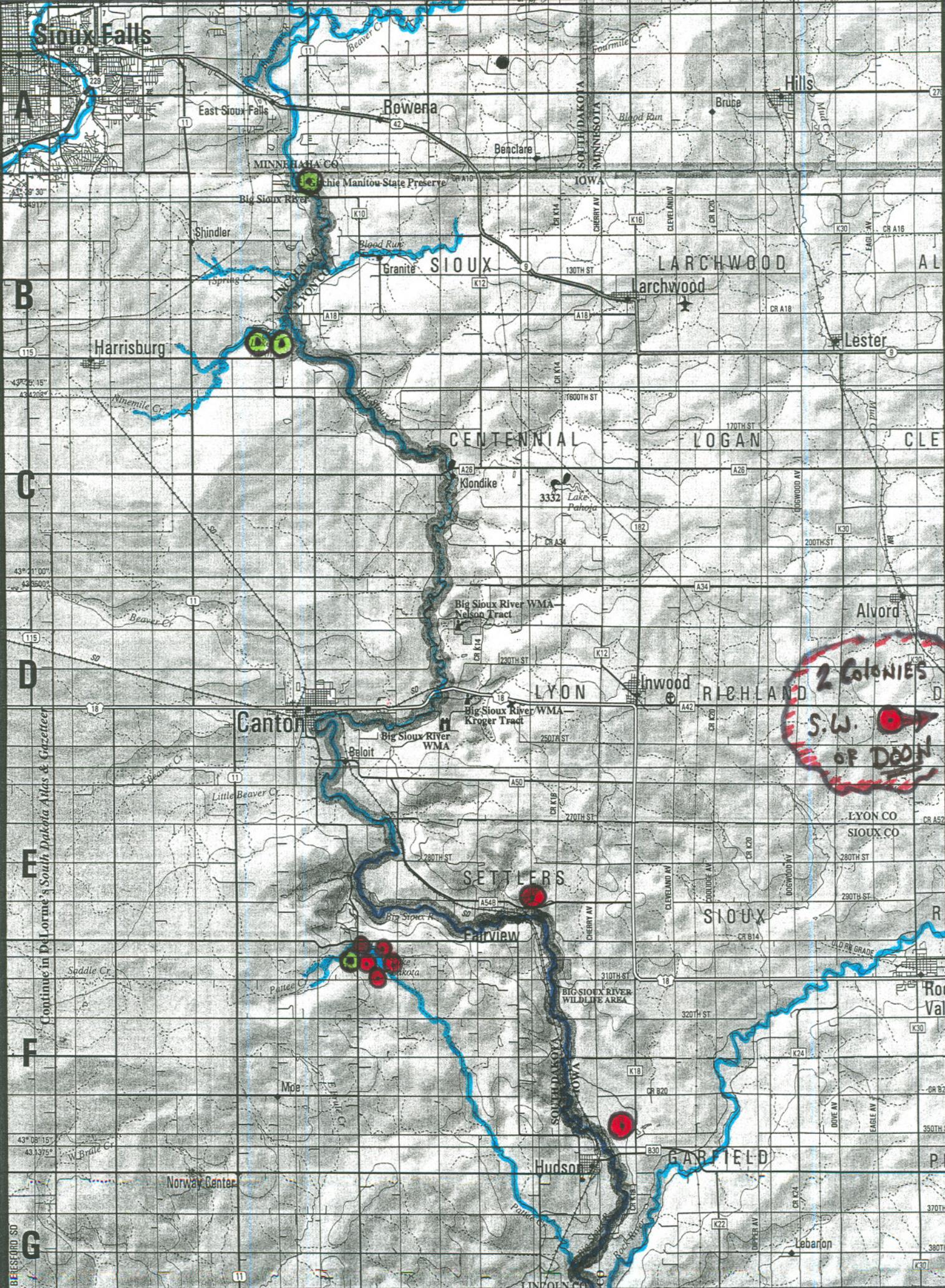
Sioux Falls

Rowena

Larchwood

Lester

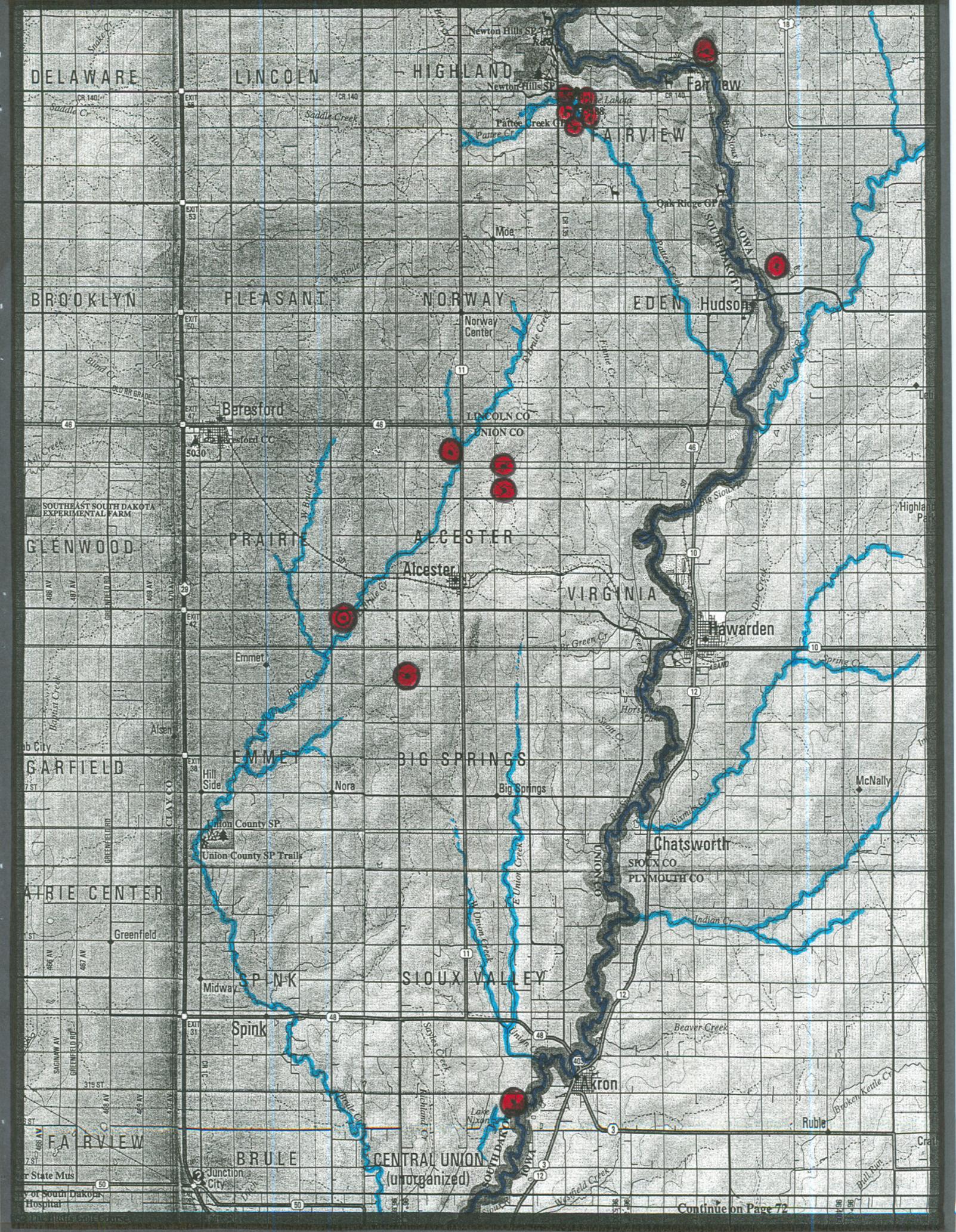
Rock Rapids



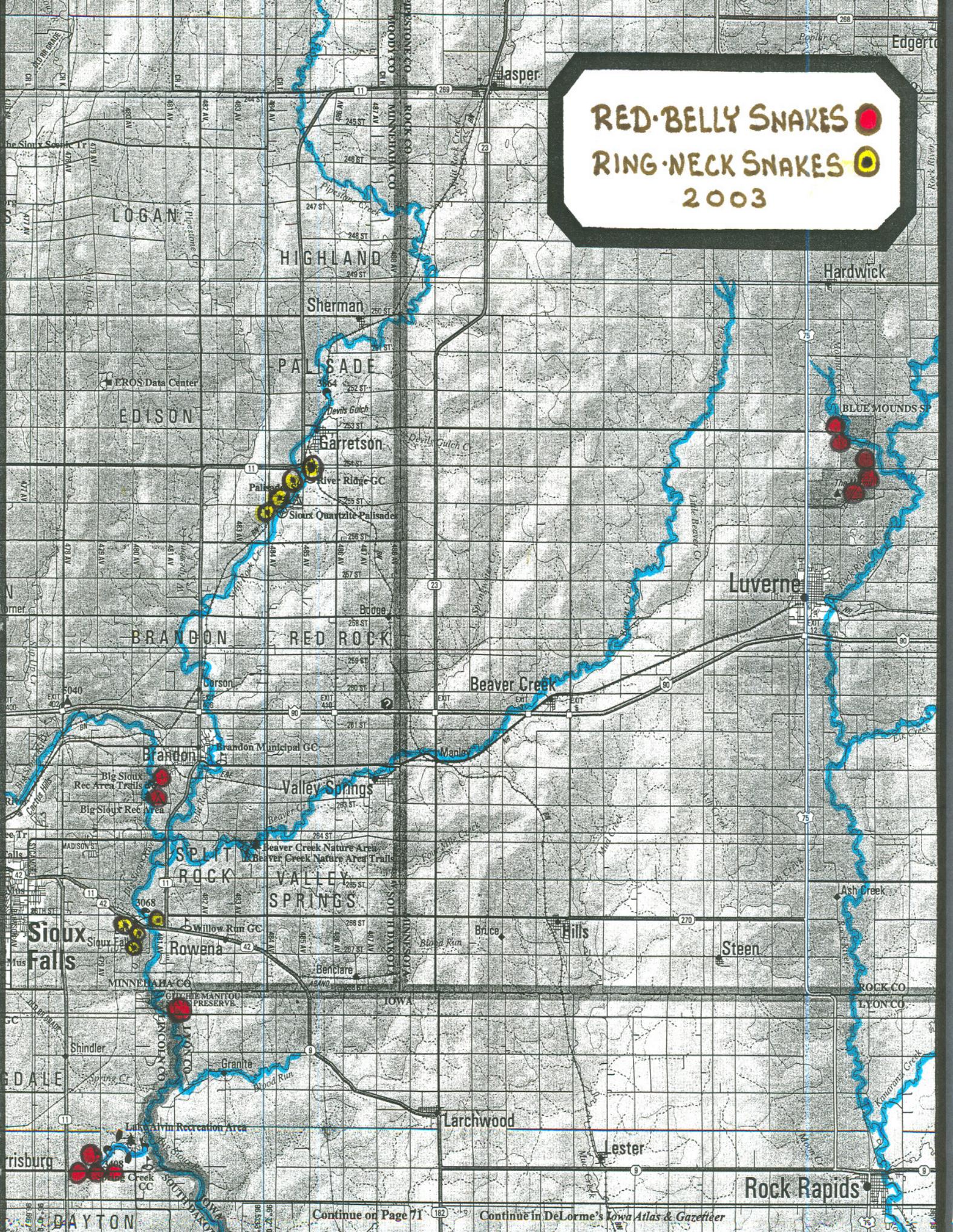
2 Colonies
S.W. OF DEER

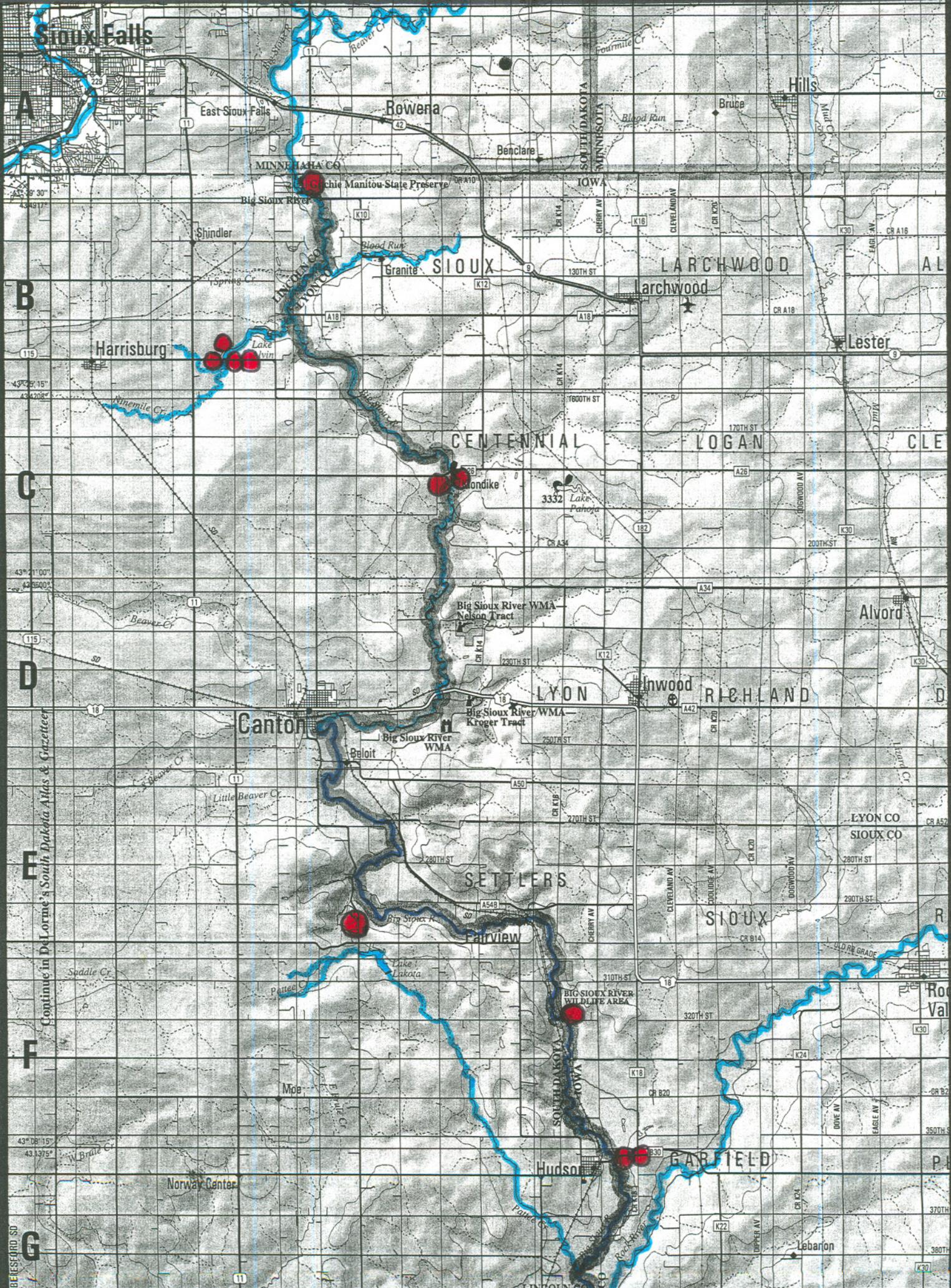
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BEESDARD SD



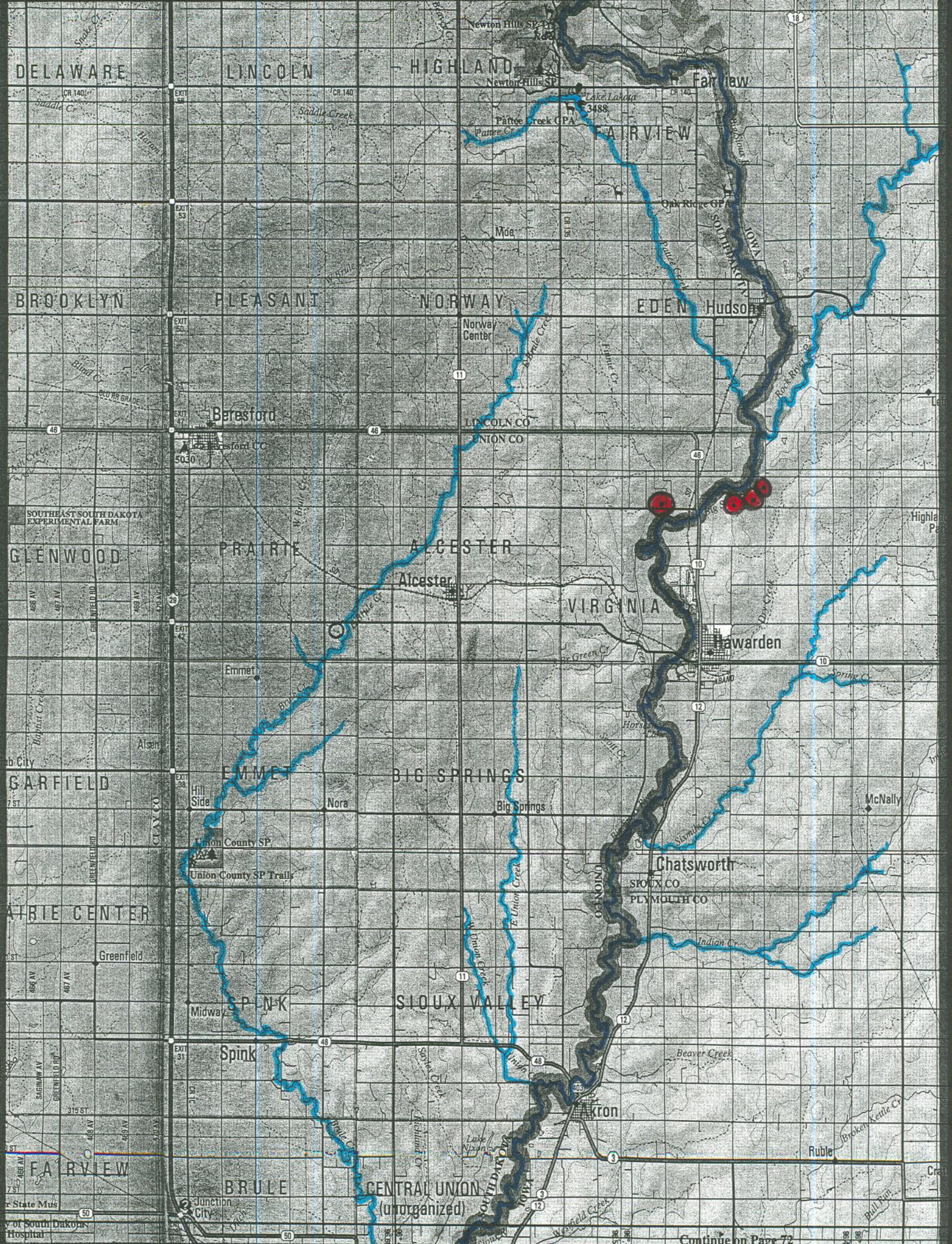
RED-BELLY SNAKES ●
RING-NECK SNAKES ●
2003





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BEESDORF SD



DELAWARE

LINCOLN

HIGHLAND

Fairview

BROOKLYN

PLEASANT

NORWAY

EDEN

GLENWOOD

PRAIRIE

ALCESTER

VIRGINIA

GARFIELD

EMMET

BIG SPRINGS

Chatsworth

FAIRVIEW

SPINK

SLOUX VALLEY

BRULE

CENTRAL UNION
(unorganized)

Continue on Page 72

A RINGNECK
SNAKE



B

C

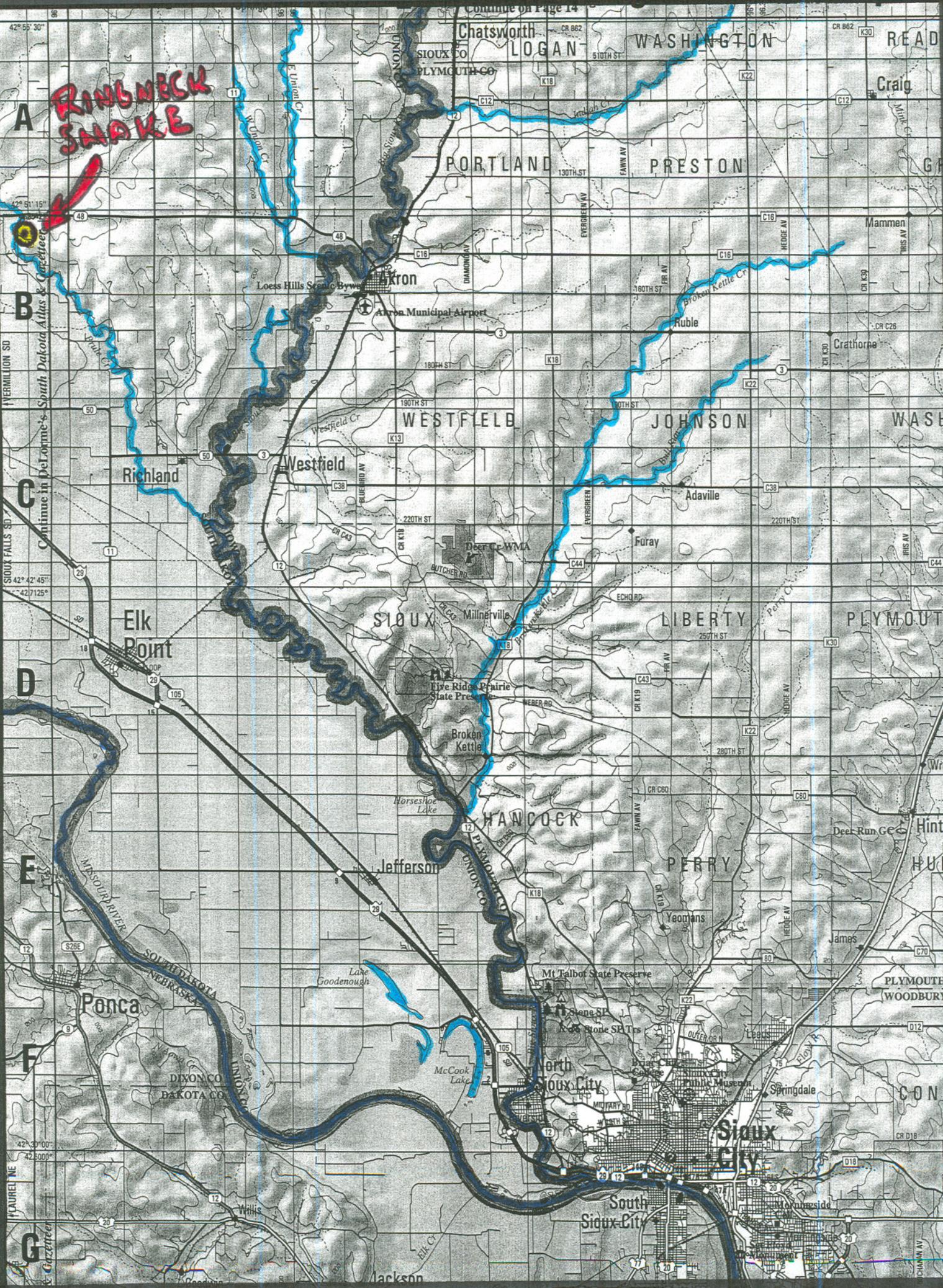
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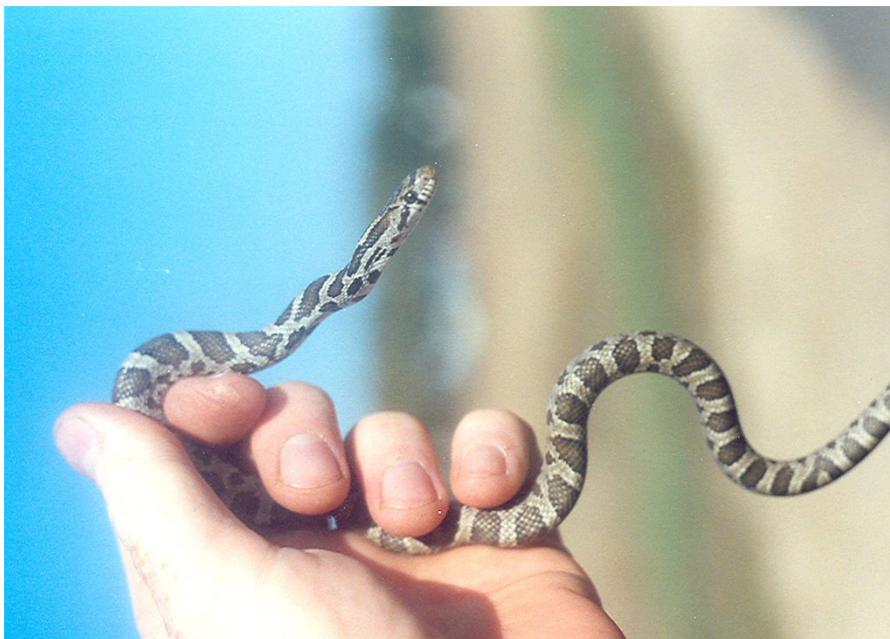
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Northern Cricket Frog
Lake Lakota, Newton Hills State Park



Fox Snake, Union Grove State Park
October 9, 2003



Lined Snake
Lake Lakota, Newton Hills State Park
October 8, 2003



Lined Snake
Indian Hills, Minnehaha County



Ring-neck Snake
Arrowhead Park, Sioux Falls
May 13, 2003



Northern Prairie Skink
Lake Lakota, Newton Hills State Park
May 16, 2003